USER INSTRUCTIONS

KP-32 KEYPANEL
EKP-32 EXPANSION PANEL
LCP-32 LEVEL CONTROL PANEL

RTS™

9350-7656-000 Rev A, 12/99

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DESCRIPTION AND SPECIFICATIONS

DESCRIPTION

The RTS™ Model KP-32 Keypanel fits in a standard 19" rack and is 2 rack spaces high. It has 32 lever keys: 30 keys are for intercom talk/listen assignment; 1 key is for call waiting response; and 1 key is for headset/microphone/program selection and volume setup. The KP-32 combines all of the programmable features of the KP9X Series Keypanels and the KP-12 Keypanel. Plus, it adds significant new features such as digital signal processing and binaural headset operation with left/right assignment of audio signals. The KP-32 also introduces large, super-bright, long-life fluorescent displays with adjustable brightness control, making it suitable for all types of ambient lighting from direct sunlight to darkness.

FEATURES

Super-bright, fluorescent displays: Provide much better visibility and useable life than LCD displays. A display saver mode with programmable scrolling message extends display life and conserves power during periods of inactivity.

32 lever keys, with 30 keys available for full talk/listen configuration: Doubles the number of channels over the KP9X series keypanels. Keys support both latching (hands-free) and momentary (push-to-talk) operation.

Enhanced programming keypad: Provides the complete KP9X keypad sequences, plus new keypad sequences, plus an extensive scrollable menu system. Menus include helpful prompts to walk the user through setup.

Only 90 mm deep behind the front panel (approximately 130 mm with connectors): Perfect for consoles, OB vans, etc.

Digital Signal Processing (DSP): Improves microphone voice activation and limiting. Adds new mixing, metering, and filtering capabilities.

Binaural (5-pin) Headset Connector: Works with the DSP mixing feature. Lets you independently assign intercom, microphone, and program audio to left or right headphone. Note: monaural (4-pin) connector available as an option. For monaural operation, the mixer lets you select which items are monitored in the headphones.

Easy upgrades: Firmware updates can be received via the internet, for example, and then downloaded to the KP-32 via the intercom connection. Ready for future communication enhancements, including coax, fiber, and ISDN. (For further information, search for keyword "firmware" in ADAMedit help.)

OPTIONS

Connector Module: Factory install or easy add-on. Provides connectors for two line-level audio inputs (program 1 and 2), an unswitched, balanced microphone preamplifier output, an external headset, an external speaker output, and a foot switch input (for remote switch activation of all "armed" talk keys, or just one key). Also includes a General Purpose Input / Output (GPIO), with four opto-isolated inputs, two open-collector outputs, and two SPDT relay outputs. Inputs can activate single keys, groups of keys, or change setup pages. Outputs can activate external devices from keypanel keys or from GPI inputs.

EKP-32 Expansion Keypanel. Add 32 intercom keys for a total of up to 64 keys (62 intercom keys total).

LCP-32/2 Level Control Panels. Provide easy adjustment of point-to-point and party line listen levels for individual intercom keys. One LCP-32/2 adjusts the top row of keys, and one adjusts the bottom row. LCP-32/2 panels are 1 RU high, 19" wide.

SPECIFICATIONS

Microphone Preamplifier

Audio Input Level (at 1 kHz):	
Electret Mic:	-42 dB, 150 ohms
Dynamic Mic:	-60 dBm, 150 ohms
Output Level (to matrix):	+8 dBu, ± 0.2 dBu
Max Voltage Gain, Mic to Line:	70 dB, ± 2 dB
Frequency Response:	100 Hz to 10 kHz, ± 2 dB

Tone Generator

Output Level (to matrix):	+8 dBu ± 2 dBu
Output Frequency:	500 Hz

Headphone Amplifier:

Maximum Voltage Gain:	200 dB
Frequency Response:	100 Hz to 10 kHz, ± 2 dB
Headphone Impedance:	8 to 600 ohms
Output Power:	1 W into 50 ohms
Output Voltage Level:	8 volts peak-to-peak (max.)
Sidetone Range:	15 dB

Speaker Amplifier and Speaker

Frequency Response:	100 Hz to 10 kHz, ± 2 dB
Output Power (per amplifier):	4 watts into 4 ohms
Output Voltage Level:	16 volts peak-to-peak (max.)
Volume Control Range:	30 dB
Speaker Rating:	4 watts max

Intercom Input/Output

Input:	Nominal: +8 dBu. Peak: ± 20 dBu max.
Output:	+8 dBu, ± 2 dBu nominal

External Line Input: (Program Input)

Input Level	+8 dBu nominal

General

AC Supply:	External, switching type, 100-240 VAC, 50/60 Hz with locking DIN connector for attachment to the keypanel and universal IEC connector for connection to various AC mains cords
Environmental:	
Storage:	-40°C to +60°C
Operating:	-10°C to +41°C
Dimensions:	19" wide x 2RU x 3.5" (90 mm) deep

Connectors (**Other connector options available)**

Panel Microphone Connector	
Connector Type	3-circuit, 1/4" phone jack w/threaded metal bushing, compatible w/ RTS MCP5/6
Pin-out	Tip: +Audio and DC bias
	Ring: Common
	Sleeve: Chassis ground

Headset Connector	
Connector Type	XLR5 female
Pin-out	Pin 1: Mic low
	Pin 2: Mic high
	Pin 3: Common
	Pin 4: Headphone left high
	Pin 5: Headphone right high
Power Input Connector	
Type:	5-pin locking DIN
Pin-out	Pin1: Common
	Pin2: Common
	Pin3: +5VDC, 1.50A Max.
	Pin4: -15VDC, 0.150A Max.
	Pin5: +15VDC, 0.5A Max.
Intercom Connectors: Parallel-wired DE9S and RJ12 Connectors	
Type	DE9S
	Pin 1: Data +
	Pin 2: Data -
	Pin 3: Audio in (from matrix) shield
	Pin 4: Audio out (to matrix) +
	Pin 5: Audio out (to matrix) -
	Pin 6: Data shield
	Pin 7: Audio in (from matrix) -
	Pin 8: Audio in (from matrix) +
	Pin 9: Audio out (to matrix) shield
Type	RJ12
	Pin 1: Data -
	Pin 2: Audio in (from matrix) +
	Pin 3: Audio out (to matrix) +
	Pin 4: Audio out (to matrix) -
	Pin 5: Audio in (from matrix) -
	Pin 6: Data +
Expansion Connector	RJ45
LCP Connector	RJ45
Approvals	UL, CSA, VDE, CE

INSTALLATION

OPTION DIP SWITCH SETTINGS

Switch 1: Latch Enable/Disable

Default setting = Open: Enable.

Description: An intercom key can always be turned on for momentary conversation by pressing and holding the key during the conversation. There is also an electronic latching feature that lets you tap intercom keys to turn them on or off. This permits convenient hands-free conversation. However it can also result in a talk circuit being left on unintentionally. For example, a key that talks to a public address system could be accidentally left on. Or an IFB key (a type of key assignment that is often used by a director or producer to give instructions to a listener, such as a news anchor during a television broadcast) could accidentally be left on, causing confusion for the IFB listener. To prevent such accidents, the latching feature can be turned off.

☞ DIP switch 1 disables latching for the entire keypanel. If you just need to disable latching for selected keys, leave DIP switch 1 in the "Open" position. Then, disable latching for the desired keys using the "D" check boxes in the Keypanels / Ports setup screen of ADAMedit.

Switch 2: Key Gain Enable / Disable

Default setting = Open: Enable.

Description: Enables or disables the Key Gain item in the Key Assign menu.

☞ "Key Assign Menu, Key Gain", page 33.

Switch 3: Screen Saver Enable / Disable

Default setting = Open: Enable.

With Screen Saver enabled, the KP-32 will shut off the display and enter a low-power state after a few minutes of inactivity. The display reactivates instantaneously on incoming call or when the keypanel operator actuates any control. As with all fluorescent and back-lit LCD displays, some dimming will occur after many years of operation. Using the screen saver helps maximize the display life.

Switch 4: Call Flash Timeout

Default setting = Open: 15 Second Flash.

Description: Whenever there is an incoming call and there is a talk key assigned to the caller, the talk LED next to that key will flash. The flash can be set for 15 second timeout, or until the caller's talk key is released.

Switch 5: Footswitch Enable / Disable

Default = Open: Disabled.

Description: The optional Connector Module has a footswitch (GRP CALL) input. If the footswitch is enabled (DIP switch 5 set to the "Closed" position), then keys that are latched on will not activate until the footswitch is closed. Latched keys are indicated by winking green talk LEDs (on time less than off time), and when the footswitch is activated, the LEDs provide the normal talk-on indication.

☞ See Also, "LED Indications for Intercom Keys", page 13.

Switch 6: Not Defined

Default Setting: Open.

Switch 7: Test/Debug

Default Setting: Open.

Switch 8: Test/Debug

Default Setting: Open.

ADDRESS SWITCH SETTING

General Information

In Zeus, ADAM CS, and ADAM Intercom Systems, intercom ports are arranged in groups of 8. All ports in a group share a common data port. Each KP-32 keypanel is uniquely identified on the data port by the setting of its Address switch. The method of determining the proper Address switch setting varies for each intercom system. Use the method for your intercom system as described below. Then set the white pointer on the Address switch to point to the correct setting.

Address Setting for Zeus

Intercom port connectors on the Zeus back panel are arranged in three groups of eight intercom ports. For each group, intercom port connectors are labeled ID 1, ID 2, etc. When you connect a KP-32 keypanel to Zeus, set the Address switch to match the corresponding ID number on the Zeus back panel. Note that address switch settings 0, and 9 through F are not used.

Address Setting for ADAM CS

Each Audio I/O card contains 1 group of 8 intercom ports. However, the method of breaking out the groups depends on the type of connectors on the back panel.

ADAM CS with RJ12 or DB-9 back panel: The intercom port connectors are arranged in groups of 8. The first connector at the left for each group is Address 1, the next is Address 2, and so forth. Note: Address switch settings 0, and 9 through F are not used.

ADAM CS with 50-pin Telco back panel: Determine the address setting from Table 1, page 52. To use the table, locate the intercom port number to which the KP-32 will be connected. Then, read across to the “Address” column to find the Address number. Set the KP-32 Address switch to this number. Note: settings 0, and 9 through F are not used.

Address Setting for ADAM

Each Audio I/O card contains 1 group of 8 intercom ports. Determine the address setting from Table 1, page 52. To use the table, locate the intercom port number to which the KP-32 will be connected. Then, read across to the “Address” column to find the Address number. Set the KP-32 Address switch to this number. Note: settings 0, and 9 through F are not used.

CONNECTIONS

EXP. AND LCP Connectors

Connect from the Exp. connector of the KP-32 to the Expansion 1 connector of an optional EKP-32 Expansion Panel. Use the interconnect cable supplied with the Expansion Panel. The Expansion 2 connector on the Expansion Panel can connect to a second Expansion Panel, but no more than 64 intercom keys can be operated per intercom port.

Each LCP-32 adjusts the listen levels for 16 keypanel keys, and you can connect as many LCP-32 panels as required to adjust all keys on the KP-32 and on an optional EKP-32 Expansion Panel. An interconnect cable is supplied with each LCP-32. Connect the first LCP-32 to the LCP connector on the KP-32. Connect the second LCP-32 to the first LCP-32, and so forth. Note, when arranging LCP-32 panels in an equipment rack, you should put them directly above or below the keys they will be used to adjust. See also, “Service Menu, LCP-32”, page 40.

Frame Connector

Use either of the ***Frame*** connectors (but not both) to connect to an intercom port of the intercom system. The intercom port you connect to should agree with the address that you set previously. Cable wiring diagrams are shown in Figure 1 and Figure 2.

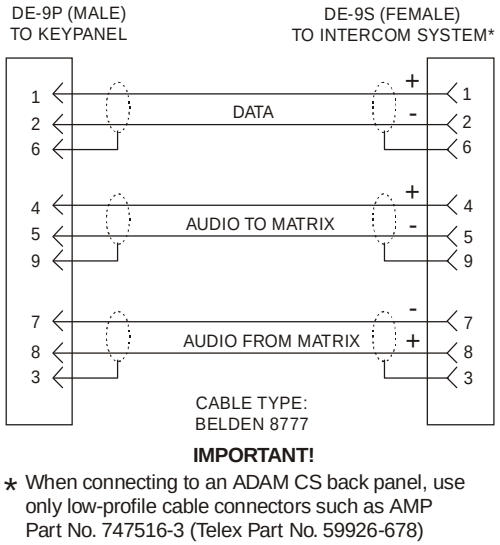

Figure 1. DE9S Intercom Cable Wiring

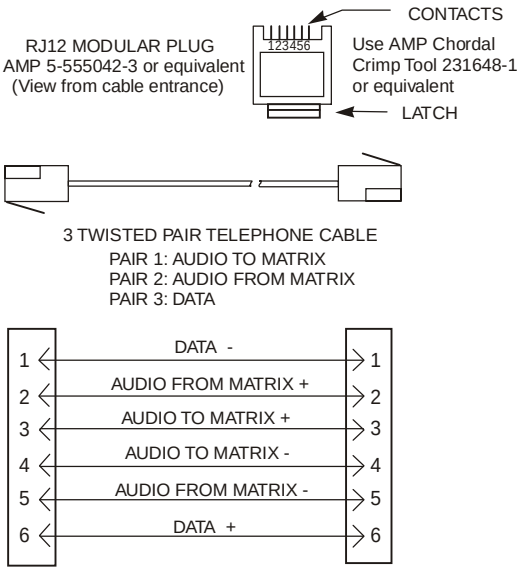

Figure 2. RJ12 Intercom Cable Wiring

Power Supply Connector

Align and insert the external power supply connector. Tighten the locking ring. Connect a power cord to the power supply and to an AC power source. The power supply accepts 100-240 VAC, 50/60 Hz.

At power-up, the alphanumeric displays will first show asterisks (****). After a few moments the intercom key assignments will display. If the keypanel cannot establish communication with the intercom system, all alphanumeric displays will continue to show asterisks. Check the cable connection.

☞ Power supply connector specifications, page 8.

Headset Connector

A stereo headset may be connected for use along with or in place of the front panel speaker and a separate microphone. Or, headphones may be connected for use with a separate microphone.

☞ Headset connector specifications, page 8.

Panel Microphone Connector

A panel microphone may be connected for talking, with either the front panel speaker or headphones used for listening. Accepts MCP5 or MCP6 Panel Microphone. Insert the microphone and rotate the entire microphone body several turns to lock in place.

☞ Panel microphone connector specifications, page 7.

BASIC KP-32 OPERATION

SCREEN SAVER OPERATION

If the KP-32 is set for screen saver operation, the alphanumeric display automatically shuts off after several minutes of inactivity. The display reactivates on incoming call or when the keypanel operator actuates any control.

☞ Switch 3: Screen Saver Enable / Disable, page 9.

☞ You can override the normal timeout period for screen saver operation and immediately place the keypanel in screen saver mode. See "Service Menu, Disply Dim", page 37.

SELECTING HEADSET OR SPEAKER

Tap the ***Headset*** / ***Vol. Sel.*** key upward. The ***Vol. Sel.*** display alternates between Hdst and Spkr with each key tap. The ***Headset*** LED lights when the headset is selected and is off when the speaker is selected.

LISTEN VOLUME ADJUSTMENTS

By default, the ***Vol.*** control adjusts the listen volume for the speaker or headset, whichever appears in the ***Vol. Sel.*** display. If program inputs are connected and activated, tap downward on the ***Headset*** / ***Vol. Sel.*** key to select the desired program source in the ***Vol. Sel.*** display (Pgm1 or Pgm2). Then, use the ***Vol.*** control to adjust the listen volume. The ***Vol.*** control defaults back to the speaker or headset after about one minute of inactivity of the control.

☞ You can save the volume adjustments to be the power-up defaults using "Service Menu, Save Cfg", page 44.

INTERCOM KEYS AND DISPLAYS

Alphanumeric Display Indications for Intercom Keys

Upper Case Letters: Upper case letters indicate keys that have any kind of talk assignment, with or without a corresponding listen assignment. Example: DIR1

Lower Case Letters: Lower case letters indicate keys that have only a listen assignment. Example: dir1.

Dashes ----: Dashes indicate a key that has no talk or listen assignment.

Flashing Alphanumeric Display: This means the key is activated to talk to an IFB, ISO, or TIF.

☞ The flashing alphanumeric display for TIF keys, remote IFB keys, and remote ISO keys can be disabled by placing a check mark next to "Don't generate tallies for TIF and trunk use" in ADAMedit (Options menu, Intercom Configuration, Options tab).

LED Indications for Intercom Keys

Talk LED Indications

The talk LED is the lower LED for each key. The talk LED indications are as follows:

Continuous Green: Talk is on and the keypanel operator can be heard at the destination.

Continuous Red Talk LED ("In-use"): The key is off, but someone is talking to the destination. This indication is provided for any local PL, IFB, ISO, or TIF key. It does not apply to remote IFB or ISO keys. This indication is provided so keypanels operators know when critical director communications are occurring. If you activate the key, either of two things will happen:

- If you activate the key and the talk LED turns continuous green, this indicates that you and the other keypanel operator are both talking to the destination.
- IFB keys only: If the talk LED flashes red when an IFB key is activated, this indicates that the other keypanel has a higher IFB priority and you cannot talk at this time.

☞ The red "in-use" indication for TIF keys can be disabled in ADAMedit: In the ADAMedit Options menu, select Intercom Configuration, then click on the Options tab. Place a check mark next to "Don't generate talliesfor TIF and trunk use". Be sure to send the change to the intercom system. Note that this will also disable the flashing alpha display when talking to remote IFBs or ISOs as previously described.

Flashing Red Talk LED ("Busy"): You cannot talk at this time. This indication occurs when you activate a local IFB key that is already in-use by a keypanel with a higher IFB priority. It also occurs when you activate any key assigned to a remote destination, but there are currently no trunks available.

☞ Note: Flashing red is also the intended indication when attempting to talk to a remote IFB while someone else with a higher trunk IFB priority is already talking. However, this will require ADAM MC version later than 9.9.x and Trunk MC version later than 7.x.x. As of this writing, these versions are not implemented. Regardless of the indication provided, you will not be heard at the remote location if your keypanel has the lower trunk IFB priority. IFB trunk priorities are set in ADAMedit. (Click the "KP" button on the ADAMedit toolbar to access Keypanels / Ports setup, then click the "Edit" button, then click the "Advanced" tab. Enter the desired IFB priority in the fields provided. Be sure to send the change to the intercom system.)

Flashing Green Talk LED (on time equal to off time): There is an incoming call from the destination assigned to the key. Activate the key to talk back.

☞ The duration of incoming call flash is controlled by DIP switch 4 on the KP-32 back panel. See "Option Switch Settings", page 9 for further information.

Winking Green Talk LED (on time less than off time): This indicates that a key is ready to talk (key is on), but requires external footswitch activation to talk.

☞ "Switch 5: Footswitch Enable / Disable", page 9.

Listen LED Indication

The listen LED is the upper LED for each key. The listen LED is green when listen is on.

Intercom Key Operation

Basic Intercom Key Operation

The "up" position of an intercom key activates listen (if assigned). The "down" position activates talk (if assigned). If there is no talk assignment for an intercom key, the talk position of the key will not activate. If there is no listen assignment, the listen position will not activate.

For momentary activation of a key press and hold the key. Then, release it when finished.

For latching operation (if enabled) tap a key; it will turn on and remain on. Tap the key again to turn it off when finished.

☞ Latching may be turned off for the entire keypanel by setting DIP switch 1 on the KP-32 back panel to the ***Closed*** position. Latching may be disabled for individual keys on a keypanel using ADAMedit: Click the KP button on the ADAMedit toolbar to open the Keypanels / Ports setup screen. Select the intercom port where the keypanel is connected. Place a check mark in the "D" check boxes for any keys where you want to disable latching. Be sure to send your changes to the intercom system.

Operation of Intercom Keys with Auto Functions

☞ Assignment of keys with auto functions is described in the programming sections that follow. Descriptions of the auto functions are also contained in the Glossary. Operation of keys with auto functions is as follows:

Talk + auto follow: Talk and listen can be activated separately. The listen assignment listens to whatever is assigned to the talk key.

Talk + auto listen: Both talk and listen will activate when talk is activated.

Talk + auto mute: Listen will turn off when talk is activated.

Talk + auto reciprocal: Listen will always be on, and talk may be turned on or off.

Talk + auto table: If an IFB talk key has an auto-table listen assignment, talk and listen can be independently activated. The listen key listens to whatever is defined as the IFB Listen Source for the IFB that is assigned to the talk key.

☞ A full explanation of the auto-table feature is beyond the scope of this manual. For further information, search for "IFB" in ADAMedit help, then read the topics "IFB Auto Table Description" and "IFB Setup Procedures".

All Call Key: Activating the key will also activate all keys to the left of it (up to, but not including another all-call key).

Talk + DIM: If a point-to-point key has the DIM function as a level 2 talk assignment, activating the key will cause the crosspoint levels to diminish for any other intercom ports that are currently listening to the same destination and that are in the same DIM table.

☞ A full explanation of DIM tables is beyond the scope of this manual. For further information, search for "dim table" in ADAMedit help.

Operation of Intercom Keys with Options

Group Option Keys: Activating the master key in a key group will activate all keys in that group according to each key's individual key assignment. Activating a slave key will not affect any other keys in the group.

☞ Key Groups setup: "Key Option Menu, Key Groups", page 35.

☞ Display Key Groups: "Display Menu, Key Groups", page 29.

Solo Key: Activating a key that has the solo option will cause all other keys to turn off until the solo key is again turned off.

☞ Solo key setup / display: "Key Option Menu, Solo", page 36.

Operation of Intercom Talk Keys with the Speaker DIM Setting

Activating any talk key will cause the speaker or headphone volume at this keypanel to diminish by the amount specified in the Dim menu item on the Service menu. Note: do not confuse this with the Talk+DIM auto function previously described (page 15). Talk+DIM affects the speaker or headphones on other keypanels when a particular talk key is activated on this keypanel. Speaker DIM affects the speaker or headphone level on this keypanel when any talk key on this keypanel is activated.

☞ For speaker DIM setting, see "Service Menu, Dim", page 37.

Operation of Intercom Keys assigned to TIF Ports

If an intercom key is assigned to talk to an intercom port that is designated as a TIF port in ADAMedit, placing the key in the talk position will activate the KP-32 dialing menu. See "TELEPHONE OPERATION", page 17, for further information.

☞ Note: You designate an intercom port as a TIF port by checking the "Port is TIF" check box in ADAMedit. (In ADAMedit, click the "KP" button on the toolbar to access Keypanels / Ports setup, then select the intercom port where the TIF s connected, then click the "Edit" button, then click the "Advanced" tab. Place a check next to "Port is TIF". Remember to send the change to the intercom system.)

MUTING THE MICROPHONE

Tap the MUTE key to turn microphone muting on or off.

The ***Vol. Sel.*** display alternates between Hdst and Mute (or between Spkr and Mute) while the microphone is muted.

☞ While muting is on, you cannot be heard on the intercom, or by anyone on the telephone, or by any device connected to the mic preamp output of the optional connector module.

CALL WAITING OPERATION

Occasionally, a keypanel may call, and there won't be a key assigned to talk back to that caller. In this case, the caller's name will appear in the ***Call waiting*** window. Press down and hold the ***Call waiting*** key to talk back.

To clear a name from the ***Call waiting*** window, tap "up" on the ***Call waiting*** key.

If a second call is received in the ***Call waiting*** window while a caller name is already displayed, the ***Call waiting*** LED will flash red. To answer the second call, tap "up" to clear the first name, then hold the key down to talk to the second caller.

☞ By default, only the names of callers who are not currently assigned to intercom keys will appear in the ***Call waiting*** window. Alternatively, you can force all caller names to display in the ***Call waiting*** window. This is controlled either by DIP switch 2 on the ADAM Master Controller card or by the ADAMedit check box titled "Always stack callers in call waiting window". (ADAMedit Options menu, Intercom Configuration, Options tab. Note: the setting in ADAMedit overrides the DIP switch 2 setting on the Master Controller card.) If your intercom system has mostly keypanels with alphanumeric displays, we recommend that you do not stack all callers in the ***Call waiting*** window.

TELEPHONE OPERATION

☞ Note: Telephone operations require an optional TIF-951 Telephone Interface. Also, you must first assign an intercom key to talk/listen to the TIF. We recommend a talk+auto listen assignment.

RECEIVING A PHONE CALL

When there is an incoming telephone call, the talk LED will flash red next to the KP-32 key that is assigned to the TIF. Activate the key to answer the call.

☞ The red flash for incoming TIF call is the default operation. Alternatively, a continuous-red talk LED indication can be provided. This is accomplished by checking the check box "Don't generate tallies for TIF or trunk use" in ADAMedit (Options menu, Intercom Configuration, Options tab). Note that this check box also affects other tally indications. For further information, press the F1 key while viewing the ADAMedit Options tab settings. Under the topic "Don't generate tallies for TIF or trunk use" click on the "see table" link to view a table containing information about operation with and without tally indications.

DIALING AND HANGING UP USING THE KP9X KEYPAD SEQUENCES

KP9X Keypad Hang-up Sequence

1. Turn off the TIF talk key. (Tap "down" to toggle talk off. The talk LED should be off.)
2. On the keypad, tap **PHONE** **CLR**.
3. Momentarily turn the TIF talk key on, then off. The TIF key talk and listen indicators will turn off and the TIF-951 "OFF" LED will activate.

☞ You can use the hang up sequence to hang up the TIF even if you did not place or answer the call.

KP9X Manual dial sequence

1. Activate the TIF listen key. (Tap "up" to toggle listen on. The listen LED should be on.)
2. Make sure the TIF talk key is off (Talk LED off).
3. On the keypad, tap **CLR** **PHONE** **PGM**.
4. Activate the TIF talk key. The talk LED turns green, the "ON" LED at the TIF-951 activates, and you should hear dial tone at the KP-32.
5. Dial the telephone number. Digits scroll in the display above the TIF key.
6. When the far end answers, you can dial additional digits (to access a mail system or automated response system, etc.). When finished dialing, momentarily turn off the TIF talk key to end dialing mode (talk LED turns red).
7. Turn the TIF talk key back on for conversation.
8. To end the call:
    a. Turn the TIF talk key off.
    b. Tap **PHONE** **CLR**.

c. Tap the TIF talk key. The TIF key talk and listen indicators will turn off and the TIF-951 "OFF" LED will activate. The TIF-951 is now ready for another call.

KP9X Redial Sequence

☞ The last dialed phone number is always stored at the TIF and over-writes any previously dialed phone number. If several people have access to the TIF, redial may not produce the results that you expect!

1. Tap the **PHONE** key to activate dialing mode.
2. Tap "up" on the TIF key to activate listen.
3. Tap **CLR** **0** **0**. The last phone number will redial.
4. After the number has dialed, click the **PHONE** key to end dialing mode.
5. If the far end answers, tap "down" on the TIF key to activate talk.
6. Use the KP9X hang-up sequence, page 17, when finished with the call.

KP9X Autodial Sequences

☞ Unlike the autodial operations using the KP-32 menu system (page 20), which store telephone numbers locally within the KP-32, the KP9X autodial operations work with telephone numbers that are stored at the TIF-951. The advantage to saving at the TIF-951 is that many users can access a common set of stored telephone numbers. A disadvantage is that users can easily over-write important telephone numbers. Also, telephone numbers at the TIF-951 are stored in volatile memory and will be lost if the TIF-951 loses power.

Storing an Autodial Number in the TIF-951

1. Tap the **PHONE** key.
2. Tap the TIF talk key to latch it on.
3. Using the number keys on the keypad, dial the phone number that you want to store. The entire phone number sequence can have up to 30 digits.

☞ To insert one or more pauses anywhere in the dialing sequence, enter **CLR** **CLR** **9** **9** for each pause. A pause may be required, for example, if you need to enter a digit to get an outside line and your phone system requires a pause before continuing to dial. If you are using credit card dialing, several pauses may also be required between the phone number and your personal access code.

4. After dialing the telephone number, click **CLR** **PGM**, then enter a two-digit number (01, 02, etc. up to 32) that you will use as the autodial number.
5. After storing the autodial number, hang up using the KP9X hang-up sequence, page 17.

Dialing an Autodial Number Stored in the TIF-951

1. Tap the **PHONE** key to activate dialing mode.
2. Tap "down" on the TIF talk key to latch it in the on position.
3. Tap **CLR** followed by the autodial number (01, 02, etc.).
4. When finished dialing, click the **PHONE** key again to exit dialing mode.

5. Hang up using theKP9X hang-up sequence, page 17.

DIALING AND HANGING UP USING THE KP-32 DIALING MENU

The dialing menu will only activate when talking to an intercom port that has the "Port is TIF" check box activated in ADAMedit. (In ADAMedit, click the "KP" button to access the Keypanels / Ports screen, then select the port where the TIF-951 is connected, then click the "Edit" button, then click the "Advanced" tab. Place a check mark next to "Port is TIF". Remember to send this change to the intercom system.)

Manual Dialing

1. Turn on the TIF talk key. `ManualDial` displays in the ***Call waiting*** window.

2. Tap the **PGM** key. `Dial#?` displays, and the dial tone should be audible in your speaker or headset.

☞ To hang up at any time after this point: tap the **BACK** key. `Hang up` will display, then tap **PGM**.

☞ While using the phone, any incoming intercom calls to the ***Call waiting*** window will go into the call waiting stack. The caller names will not be displayed, but the ***Call waiting*** LED will flash red. You may either hang up the phone and answer the intercom call, or continue with the phone call and answer the intercom call afterward.

3. Dial the phone number. Digits appear in the ***Call waiting*** window as you dial. Dialing tones are audible in the speaker or headset.

4. If the far end answers, begin your conversation.

☞ After the far end answers, you may dial additional digits (to retrieve voice mail, log onto an automated answering system, etc.).

5. If there is no answer, or to hang up when finished talking, tap the **BACK** key. `Hang up` displays. Tap **PGM** to hang up.

☞ Note: Occasionally, you may receive intercom caller names in the ***Call waiting*** window while you are talking on the phone. In this case, the dialing menu options will be cleared from the ***Call waiting*** window, and the `Hang up` option won't be available. Instead of trying to reenter the menu system, use the "KP9X Keypad Hang-up Sequence", page 17.

Redial

1. Turn on the TIF talk key. `ManualDial` displays in the ***Call waiting*** window.

2. Tap the ↓↓ key until `Redial` displays.

3. Tap **PGM**.

4. If the far end answers, begin your conversation.

☞ After the far end answers, you may dial additional digits (to retrieve voice mail, log onto an automated answering system, etc.).

5. If there is no answer, or to hang up when finished talking, tap the **BACK** key. `Hang up` displays. Tap **PGM** to hang up.

☞ Note: Occasionally, you may receive intercom an intercom caller name in the ***Call waiting*** window while you are talking on the phone. In this case, the dialing menu options will be cleared from the ***Call waiting*** window, and the `Hang up` option won't be available. Instead of trying to reenter the menu system, use the "KP9X Keypad Hang-up Sequence", page 17.

Autodial

☞ Autodial is only available after you have saved autodial numbers. See "Key Option Menu, Auto Dial", page 34.

1. Turn on the TIF talk key. `ManualDial` displays in the ***Call waiting*** window.
2. Tap the ⇊ key until `Auto Dial` displays.
3. Tap **PGM**.
4. Tap ⇊ to select the desired autodial number, then tap **PGM**.
5. If the far end answers, begin your conversation.

☞ After the far end answers, you may dial additional digits (to retrieve voice mail, log onto an automated answering system, etc.).

6. If there is no answer, or to hang up when finished talking, tap the **BACK** key. `Hang up` displays. Tap **PGM** to hang up.

☞ Note: Occasionally, you may receive an intercom caller name in the ***Call waiting*** window while you are talking on the phone. In this case, the dialing menu options will be cleared from the ***Call waiting*** window, and the `Hang up` option won't be available. Instead of trying to reenter the menu system, use the "KP9X Keypad Hang-up Sequence", page 17.

KP9X SERIES KEYPAD PROGRAMMING

☞ A summary of the keypad programming sequences is located at the back of the manual for quick reference.

KEYPAD PROGRAMMING, DISPLAY REQUESTS

Display requests let you view information about the keypanel configuration. You can display information by two methods: either by entering sequences on the programming keypad, or by scrolling the names of display requests in the ***Call waiting*** window and then selecting the desired display request. The scrolling method also gives you access to additional features that are not available with the keypad sequences. The following paragraphs discuss these two methods.

Display Requests Using Keypad Sequences

All display request sequences start with **FUNC** **DISPLAY**.

Display Panel ID

FUNC **DISPLAY** **1** .

This sequence displays the calculated port number. The calculation is based on the data group that the keypanel is connected to, combined with the Address switch setting on the back of the keypanel. Note that if the Address switch is incorrectly set, the wrong Panel ID will display.

☞ For futher information about port address calculation, see the "Port" description in the Glossary, page 49.

Tap **CLR** to quit.

Display Level 2 Talk Key Assignments

FUNC **DISPLAY** **2** .

This sequence displays all level 2 talk key assignments for about 10 seconds. `Lev2` displays in the ***Call waiting*** window.

Tap **CLR** to quit.

Display Listen Key Assignments

FUNC **DISPLAY** **3** .

This sequence displays all listen key assignments for about 10 seconds. `Lstn` displays in the ***Call waiting*** window.

Tap **CLR** to quit.

Display Setup Page Assignments

FUNC **DISPLAY** **E-PNL**

Currently, there are four setup pages available for each keypanel. Each setup page defines a set of 16 talk and listen key assignments. Most RTS keypanels have a maximum of 16 keys, so one setup page is typically assigned to the main keypanel, and is referred to as the "Main" setup page. Additional setup pages are assigned to any connected expansion panels, and are referred to as "Expansion 1", "Expansion 2", etc.).

Since the KP-32 requires 2 setup pages, it uses the main page assignments and also one expansion page (Figure 3). The EKP-32 uses two additional expansion pages.

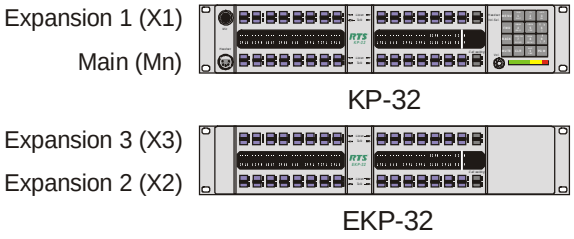

Figure 3. Setup page usage for the KP-32 and EKP-32

When you enter the sequence **FUNC** **DISPLAY** **E-PNL**, the ***Call waiting*** window displays **Mn-1** or **Mn-2**, etc. This indicates which setup page is currently being used at the "Main" position. After a few moments **X1-1**, or **X1-2**, etc. displays. This indicates which setup page is currently being used by expansion 1. Next, if there is an expansion panel connected, **X2-1** or **X2-2** etc. displays, followed by **X3-1** or **X3-2** etc. to indicate the setup page usage for expansion 2 and expansion 3.

Tap **CLR** to quit.

☞ To change the setup page assignments, see "KEYPAD PROGRAMMING, ASSIGNING SETUP PAGES", page 23.

Test Keys and Displays

FUNC **DISPLAY** **0**

When you enter this sequence, all alpha-numeric displays show a % symbol. Pressing down on any key (except the ***Headset*** / ***Vol. Sel.*** key) will cause OK to display. This verifies operation of the key. Tapping up or down on the ***Headset*** / ***Vol. Sel.*** key will cause the display to cycle through the available selections.

If latching is enabled, tapping up or down on any intercom key, or the ***Call waiting*** key, will cause the corresponding red LED to light. This verifies latching operation and also that the each red LED is OK.

Holding any key in the up or down position will cause the corresponding green LED to light. This verifies operation of the green LEDs.

Tap **CLR** to quit.

☞ Note: This sequence is similar to Service Menu, Test Panel, page 44, except that the service menu test also lets you check the operation of the keypad buttons.

Tone Generator Activation (FUNC-DISPLAY-7)

FUNC **DISPLAY** **7**.

This sequence activates the keypanel's internal tone generator. You can use the tone generator to check the audio send and receive paths to and from the matrix. For example, you can assign a talk key on the keypanel to talk to itself. When you activate the talk key, you should be able to hear the tone from the keypanel speaker or from a headset.

To turn off the tone generator, press the **CLR** key.

Display Requests Using Scrolling

The display requests described previously can also be accessed using scrolling. Scrolling also offers several additional features. To use scrolling, tap **FUNC** **DISPLAY** followed by ↓↓ or ↑↑ to scroll through the list of display requests. The display request names will appear in the ***Call waiting*** window as follows:

Id **PGM**: Displays the calculated port number. **CLR** to quit.

Lev2 **PGM**: Displays level 2 talk assignments. **CLR** to quit.

Lstn **PGM**: Displays listen assignments. **CLR** to quit.

Name **PGM**: Displays crosspoints closed to this keypanel. **CLR** to quit.

Type **PGM**: Displays level 1 talk key assignment types. **CLR** to quit.

Mtx **PGM**: Displays matrix ID for all level 1 talk assignments. **CLR** to quit.

Tone **PGM**: Turns on tone generator. **CLR** to quit and turn off tone generator.

Epnl **PGM**: Displays setup page assignments. Mn=KP-32 bottom row keys. X1=KP-32 top row key. X2=EKP-32 bottom row keys. X3=EKP-32 top row keys.

Gain **PGM**: After selecting this item, tap up on any listen key with a point-to-point or party line assignment. The current listen gain from this keypanel to the intercom port or party line displays in the ***Call waiting*** window. Tap ↓↓ or ↑↑ to change the gain. **CLR** to quit. Use VRst **PGM** to reset all gains.

VRst **PGM**: Reset all port / party line gains to 0dB.

Asgn **PGM**: Displays a list of key assignments that are set up for this keypanel, but not currently accessible. This includes talk level 1 assignments on setup pages that are not currently assigned, and any key assignment that might be obscured by the call-waiting window. You can scroll through the list using the ↓↓ ↑↑ keys. Then use the ***Call waiting*** key to talk to any of the listed destinations.

Test **PGM**: Test keys and displays. **CLR** to quit.

Vxxx : Display keypanel firmware version. **CLR** to quit.

KEYPAD PROGRAMMING, ASSIGNING SETUP PAGES

1. Tap the **E-PNL** key.
2. Select one of the four setup pages: tap **1**, or **2**, etc.
3. Tap any key in the row of keys where you want to assign the setup page.

Notes

- The same setup page cannot be assigned in more than one place. If a setup page is already assigned somewhere else, you must clear or change that assignment first. With the exception of the main row assignment, you can clear any page assignment from a row of keys by entering **E-PNL** **0** **PGM**, then pressing any key in the row.
- If you cannot change the setup page assignments for a particular keypanel, this feature may be restricted in ADAMedit (Keypanels / Ports screen, Edit button, Setup tab, Setup Page Options).

☞ To display setup page assignments at any time, see "Display Setup Page Assignments", 21.

KEYPAD PROGRAMMING, ASSIGNING INTERCOM KEYS

General

There are three methods to assign intercom keys with keypad programming. These methods are summarized below and explained on the following pages.

- Key Assignment using Keypad Numeric Entry: Using this method, you enter the panel number, party line number etc. that you wish to assign to a key. This method requires that you know the number (not the name) of the port, party line etc. that you wish to assign. Since most users do not have access to this information, this method of key assignment is not recommended.
- Key Assignment by Copying an Assignment: Using this method, you can copy an assignment from one key to another. You can also use this method to transfer an incoming call to a talk key and/or listen key.
- Key Assignment using Alpha Scrolling: Using this method, you scroll through lists of alpha names in the ***Call waiting*** window and select the name of the panel, party line etc. that you want to assign. Then you copy that name to a key. If descriptive names have been assigned (using the intercom system configuration software) alpha scrolling is easiest to use.

Assigning Keys Using Keypad Numeric Entry

☞ Each programming step must be completed within 4-5 seconds. Otherwise, the programming sequence will automatically quit.

General Procedure

1. For talk level 2 assignment only: Tap **0** **0**. Otherwise, skip this step.
2. Select the key assignment type:

   NUM Intercom port.

   PL Party line.

   AUTO Auto function.

   FUNC **SLIST** Special list.

   FUNC **IFB** IFB

   FUNC **ISO** Camera ISO

   FUNC **RELAY** Relay or GPI output.
3. Auto function assignment only: Tap an additional number to select the desired auto function:

   1 Auto listen (listen keys only)

   2 Auto follow (listen keys only)

   3 Auto mute (listen keys only)

   4 Auto reciprocal (listen keys only)

5 All call (talk level 1 only)

6 DIM (talk level 2 only, for point-to-point key, must enter 00 first)

7 Auto table (listen only, when talk level 1 is an IFB assignment)

4. Trunked intercoms only: (Skip when assigning auto functions or local key assignments.) Select an intercom matrix (tap **1**, or **2** etc.).

☞ Intercom system numbers are the numbers that appear in the "Icm" column in CStrunk when you select "Names" or "Setup" from the Intercoms menu.

5. (Skip when assigning auto functions.) Tap one or more number keys to select the desired port number, party line number, etc:

   a. If the destination is in the local matrix, just enter the number.

   b. If the destination is in a remote matrix, you must always enter exactly 3 digits for a port number, or exactly 2 digits for anything else. For example, to assign port 1 you must enter **0** **0** **1**; for party line 1 you must enter **0** **1**.

6. Tap **PGM**.

7. Tap down on a key to assign talk. Tap up to assign listen.

☞ If a key will not accept an assignment, the destination that you are trying to assign may not be scrolling enabled in ADAMedit. Or, the key that you are trying to assign may be restricted in ADAMedit.

☞ Auto functions are always assigned in the local intercom system, even when used with keys assigned to a remote intercom system. For example, you can program a talk key to talk to a remote party line and then program the listen key using auto-listen on the local intercom. Pressing the talk key automatically activates listening for the remote party line.

Programming Key Assignments Using Copy

There are two ways to copy key assignments: 1) you can copy a call from the ***Call waiting*** window to a key; or 2) you can copy one key's assignment to another key.

Copying a Call from the Call waiting Window to a Key

1. While the caller's name is displayed in the ***Call waiting*** window, tap the **COPY CW** key.

2. Tap the key where you want to copy to. The name of the caller should appear in the display above the key.

☞ If a key will not accept an assignment, the destination that you are trying to assign may not have scrolling enabled in ADAMedit. Or, the key that you are trying to assign may be restricted in ADAMedit.

Copying One Key Assignment to Another Key

1. Tap the FUNC key.

2. Tap the EX COPY key.

3. Press the talk or listen key from which you wish to copy.

4. Press the talk or listen key to which you wish to copy. The name of the key assignment should appear in the display above the key.

☞ If a key will not accept an assignment, the destination that you are trying to assign may not have scrolling enabled in ADAMedit. Or, the key that you are trying to assign may be restricted in ADAMedit.

Programming Key Assignments Using Alpha Scrolling

Alpha scrolling lets you scroll through a list of names of ports, party lines etc. in the ***Call waiting*** window. Once the desired name is displayed in the window, you can copy it to a key. There are four scrolling modes: intercom, type, prefix and single-step. The following example demonstrates their use.

Example: Assign a port to a key using the various scrolling modes.

1. If the port is located in a remote intercom system, tap FUNC ↑↑ or FUNC ↓↓ to enter intercom scroll mode and scroll up or down the list of intercoms in the ***Call waiting*** window. Otherwise, skip to step 2.

2. When the desired intercom system name is displayed, or when making an assignment in the local intercom system, tap FUNC TYPE to activate type scroll mode.

3. Use the ↑↑ or ↓↓ keys to locate the desired type of communication. In this example, you would scroll to “P-P”.

☞ Abbreviations for types of communication:

- P-P: Point-to-Point
- PL: Party Line
- IFB: IFB
- SPCL: Special List
- RLY: Relay or GPI output.
- ISO: ISO

4. When the desired type of communication is displayed, press PGM to retrieve the requested list. Pressing PGM also exits type scroll mode and places the keypanel in single-step scroll mode.

☞ In some cases, “WAIT” may display briefly while the requested list is being retrieved. "N/A" may display if there is no list. In this case, scrolling is disabled in ADAMedit for all destinations of the selected type. For further information about scroll settings, search for keyword "scroll" in ADAMedit help.

5. When the keypanel is in single-step scroll mode it may take a long time to scroll to the desired name (this is particularly true of point-to-point lists). To speed up the process, you can use prefix scroll mode. Prefix scrolling mode scrolls through a list in alpha-numeric order, but displays only the first occurrence of each two-character prefix. For example, if your intercom system had users CAM1, CAM2, CAM3, DIR1, DIR2; prefix scrolling would display CAM1 followed by DIR1. Once you locate a desired two-character prefix using prefix scroll, you can switch back to single-step scrolling to make your final selection. Tap PREFIX to enter prefix scroll mode, then use the ↑↑ ↓↓ keys to scroll. When you locate a name with the same first two characters as the name you are looking for, tap the PGM key to return to single-step scrolling mode.

6. In single-step mode, use the ⇈ ⇊ keys to make your final intercom port selection.

☞ If you cannot locate the destination that you are looking for, it may not have scrolling enabled in ADAMedit.

7. Copy the selected port to a talk or listen key:

   a. Tap **COPY**

   b. Tap down on an intercom key to assign talk, or tap up to assign listen.

Clearing a Key Assignment

There are two ways to clear a key assignment:

Method 1: Clearing the Call waiting Window and Copying it to a Key

1. Clear the ***Call waiting*** window, if necessary, by tapping up one or more times on the ***Call waiting*** key.
2. Tap the **COPY CW** key.
3. Tap the key that you want to clear. Tap up to clear listen, down to clear talk.

☞ If a key will not clear, it is probably restricted using the "R" check box in ADAMedit.

Method 2: Copying a Blank Key Assignment to the Key that You want to Clear

1. Tap the **FUNC** key.
2. Tap the **EX COPY** key.
3. Tap an unassigned key.
4. Tap the key that you want to clear. Tap up to clear listen, down to clear talk.

☞ If a key will not clear, it is probably restricted using the "R" check box in ADAMedit.

THE KP-32 MENU SYSTEM

☞ A chart of the menu system is located at the back of the manual for quick reference.

MENU SYSTEM, MENU ACCESS

1. Clear all names from the ***Call waiting*** display (if not clear) by tapping "up" one or more times on the ***Call waiting*** key.
2. Tap MENU to activate the menu system.
3. Press ↓↓ to scroll forward through the list of menus. Press ↑↑ to scroll back.
4. Tap FWD or PGM to enter a menu. Tap BACK to exit a menu.
5. Within a menu:
   - Press ↓↓ or ↑↑ to scroll.
   - Tap FWD or PGM to select an item.
   - Tap BACK to cancel a selection or to go back to the previous menu level.

MENU SYSTEM, DISPLAY MENU

Use this menu to display information about the keypanel configuration.

Display Menu, Asgn Type

Displays the talk level 1 assignment types for all keys. Abbreviations for the key assignment types appear in the alphanumeric displays as follows:

- P-P: Point-to-point talk key.
- PL: Party line talk key.
- IFB: IFB talk key.
- SPCL: Special list talk key.
- RLY (System relay): The key activates a GPI output at the intercom frame, or a relay output at a UIO-256 or FR9528 frame.
- ISO: Camera ISO talk key.
- UPL: UPL resource key.
- AC: All-call key.

☞ For descriptions of the various key assignment types, see the "GLOSSARY", page 46.

Display Menu, Chans On

Displays an alpha list, in the ***Call waiting*** window, of all intercom ports that currently have talk crosspoints closed to this keypanel. Chans On is typically used to locate an open mic or other open audio source that needs to be shut off. The most likely cause is typically a talk key that has been left on at some

keypanel. In this case, use the ↓↓ and ↑↑ keys to scroll through the list of names. You can then press the ***Call waiting*** key to ask the person at the other end to turn off their talk key.

Display Menu, Key Groups

Use the ↓↓ or ↑↑ key to select Group 1, Group 2, etc. Then press FWD or PGM to display the group. The talk and listen LEDs of the master key will be lit red and the talk and listen LEDs for the slave keys will be lit green.

☞ Key Groups setup: Key Option Menu, Key Groups, page 35.

Display Menu, Level 2

Displays the talk level 2 assignments for all keys.

☞ Talk Level 2 Description, page 51.

Display Menu, Listen

Displays the listen assignments for all keys.

Display Menu, Matrix

Displays the intercom system name for all talk level 1 key assignments. In non-trunked intercom systems, the intercom system name is always LOCL (local). In trunked intercom systems, intercom system names are created in CStrunk (Intercoms menu, Names.)

☞ Trunking Description, page 51.

Display Menu, Panel ID

Panel ID displays the calculated port number that the keypanel is connected to. The calculation is based on the data group that the keypanel is connected to, along with the Address switch setting on the keypanel. If the Address switch is incorrectly set, the wrong Panel ID will display. Panel ID also displays the port alpha in brackets if the port is not scroll restricted.

☞ ADDRESS SWITCH SETTING, page 10.

Display Menu, Version

Displays the firmware version of the keypanel.

☞ For firmware upgrades, contact your intercom system dealer. The KP-32 firmware can be upgraded from ADAMedit. In ADAMedit Help, search for "firmware update".

MENU SYSTEM, KEY ASSIGN MENU

Use this menu to assign intercom keys, to adjust listen levels for point-to-point keys and party line keys, and to assign setup pages.

General Procedure to use the Key Assign Menu

1. Clear the ***Call waiting*** window if necessary, by tapping upward one or more time on the ***Call waiting*** key.

2. Tap **Menu**

3. Tap ↓↓ to scroll down to the `Key Assign` menu.

3. Tap **PGM** or **FWD** to enter the menu.

☞ If you do not have a trunking intercom system, skip to step 5.

4. Remote key assignment only (trunking systems only): If your intercom system is configured for trunking, `Matrix` displays in the ***Call waiting*** window. You must select a remote intercom matrix before assigning intercom keys to destinations in that matrix. You do not need to select an intercom matrix if you are assigning keys in your own intercom system. Also, do not select an intercom matrix if you are assigning auto functions or setup pages, or if you are changing listen gains for remote point-to-point keys or remote party line keys. Select a matrix as follows:

   a. Press **FWD** or **PGM** to access the Matrix list.

   b. Press ↓↓ o r ↑↑, to locate the desired matrix.

   c. Press **FWD** or **PGM** to select a matrix. Wait may display while the scroll lists for that matrix are loading.

5. `Pt-to-Pt` should now display in the ***Call waiting*** window (both for local and remote key assignment). This is the list of available point-to-point key assignments. Press ↓↓ or ↑↑ to select a different list as follows:

   `Pt-to-Pt`: Assign a key to talk/listen to another intercom port.

   `Party Line`: Assign a key to talk/listen to a party line.

   `IFB`: Assign a key to talk/listen to an IFB.

   `Spcl List`: Assign a key to talk/listen to a special list.

   `Sys Relay`: Assign a key to activate a relay or GPI output.

   `Camera ISO`: Assign a key to talk/listen to an ISO.

   `UPL Resrc`: Assign a key to activate a UPL resource.

   `Auto Func`: Assign an auto function to a key. (If you select this item, skip the rest of this procedure and go to "Key Assign Menu, Auto Func", page 32.)

   `Key Gain`: Adjust the listen gain for a key that already has a point-to-point or party line assignment. (If you select this item, skip the rest of this procedure and go to "Key Assign Menu, Key Gain", page 33.)

   `Reset Vols`: Restore the default listen level for keys that have a point-to-point or party line assignment. (If you select this item, skip the rest of this procedure and go to "Key Assign Menu, Reset Vols", page 33.)

   `Setup Page`: Change the setup page assignments. (If you select this item, skip the rest of this procedure and go to "Key Assign Menu, Setup Page", page 34.)

6. Tap **PGM** or **FWD** to select a list. In some cases `Wait` may display while the requested list is uploaded from the intercom system.

7. When the requested list is displayed, press ↓↓ or ↑↑, to locate the desired assignment.

8. Tap PGM or FWD to select the assignment.

9. Talk Lvl 1 should now display in the ***Call waiting*** window. Press ↓↓ or ↑↑ if necessary to select a different option. Options are as follows:

    - Talk Lvl 1: Assigns only talk level 1. Leaves the listen assignment as is.
    - Listen: Assigns only listen. Leaves the talk assignment as is.
    - Talk + AF: Assigns talk level 1, with auto-follow listen.
    - Talk + AL: Assigns talk level 1, with auto-listen.
    - Talk + AM: Assigns talk level 1, with auto-mute listen.
    - Talk + AR: Assigns talk level 1, with auto-reciprocal listen.
    - Talk Lvl 2: Assigns talk level 2.

If you attempt to assign talk level 2 to a key and there is no talk level 1 assignment, your assignment will go on talk level 1.

If you change the talk level 1 assignment for a key that also has a talk level 2 assignment, the talk level 2 assignment will be erased.

10. Tap PGM or FWD to select one of the previously listed items.

11. Tap Key should now display.

12. Tap an available intercom key. Tap down for any kind of talk key assignment. Tap up for a listen-only key assignment.

    - If you assign any type of talk key, the assignment name will appear in the alphanumeric display above the key.
    - If you add a listen assignment to an existing talk assignment, the listen assignment will appear briefly in the alphanumeric display to confirm the assignment. Then the talk assignment will reappear.
    - If you assign a key that is listen only, the assignment name will appear briefly in upper-case letters, then will change to lower-case letters.

13. This completes the key assignment procedure. Refer to any notes below regarding the various key assignment types.

☞ When reassigning keys remember to remove any Chime, Solo, or Key Group options if they will not be needed for the new key assignment. Chime setup, page 35. Solo setup, page 36. Key Groups: Display, page 29; setup, page 35.

Key Assign Menu, Matrix

Matrix appears only for trunked intercom systems. You must select a remote intercom matrix before assigning intercom keys to destinations in that matrix. You do not need to select matrix to assign keys to destinations in your own matrix. You also do not need to select a matrix when assigning an auto function to a key.

Key Assign Menu, Pt-to-Pt

Assigns a key that talks or listens to another intercom port. Note that some pt-to-pt destinations may be non-keypanel devices that cannot activate talk and listen paths. Therefore, if you want full communication, you may need to assign both talk and listen on the key.

Key Assign Menu, Party Line

Assigns a key that talks and/or listens to a party line. The key will have no effect until members have been assigned to the party line in ADAMedit. Note that party lines members are usually non-keypanel devices that cannot activate talk and listen paths. Therefore, if you want full communication with the party line, you will need to assign both talk and listen on the key. If all communications will normally be 2-way, you may wish to assign the key as Talk + auto listen.

Key Assign Menu, IFB

☞ By default, all IFBs are restricted and you will see `Not Avail` when you attempt to select this item. To see IFBs you must check the appropriate Scroll Enable check boxes in ADAMedit.

Key Assign Menu, Spcl List

Assigns a key that talks and/or listens to a special list. The key will have no effect until members have been assigned to the special list in ADAMedit. Note that some or all special list members may be non-keypanel devices that cannot themselves activate talk and listen paths. Therefore, if you want full communication with all members of the special list, you may need to assign both talk and listen on the key.

Key Assign Menu, Sys Relay

Sys Relay refers to any of several types of control devices that can exist in the intercom system, including:

- The 8 GPI outputs from an ADAM Frame (J11 on the XCP-ADAM-MC Breakout Panel).
- The 8 GPI outputs of an ADAM CS frame (J903 on the ADAM CS back panel).
- The relay outputs of an FR9528 Relay Frame (RELAY OUTPUTS connector on the FR9528 back panel).
- The 16 GPI outputs of a UIO-256 Universal Input/Output Frame (J5 on the UIO-256 back panel).

Key Assign Menu, Camera ISO

☞ By default, all ISOs are restricted and you will see `Not Avail` when you attempt to select this item. To see ISOs you must check the appropriate Scroll Enable check boxes in ADAMedit.

Key Assign Menu, UPL Resrc

☞ By default, all UPL resources are restricted and you will see `Not Avail` when you attempt to select this item. To see UPL resources you must check the appropriate Scroll Enable check boxes in ADAMedit. (In the ADAMedit System menu, select UPL Resources. Then enter check marks in the appropriate Scroll Enable boxes.)

Key Assign Menu, Auto Func

1. Press **FWD** or **PGM** to select auto functions in the Key Assign menu. Then press ⇊ o r ⇈ to locate the desired auto function as follows:

- AutoFollow (AF, for listen keys only)
- Auto Listn (AL, for listen keys only)
- Auto Mute (AM, for listen keys only)
- Auto Recip (AR, for listen keys only)
- All Call (AC, for talk level 1 only)
- Dim (Dim Table function, for talk level 2 on point-to-point keys only)

2. Press FWD or PGM to select the desired auto function.
3. Tap Key displays. Tap an intercom key to assign the selected auto function. Tap up to assign all auto functions except All Call or DIM. Tap down for All Call or DIM.

☞ If the assignment is successful, the abbreviation for the auto function will appear in the alphanumeric display for that key. However, if you try to assign an auto function to a key that already has that auto function assigned, the assignment will be ignored. The assignment will also be ignored if scroll enable for auto functions has been disabled in ADAMedit, or if the key you are trying to assign has been restricted in ADAMedit.

☞ You can tap CLR to exit and return to normal operation, or tap BACK to return to the auto function menu and make more assignments.

☞ **Trunked intercom systems:** Do not select a matrix before assigning auto functions. All auto functions are assigned using the local matrix menus.

☞ You do not need to run Save Cfg to store auto function assignments. These are stored in the intercom system.

☞ For descriptions of the auto functions, see "GLOSSARY", page 46.

Key Assign Menu, Key Gain

Use this menu item to adjust the listen gains for point-to-point or party line keys. The key that you want to adjust must already have a point-to-point or party line listen assignment.

1. Press FWD or PGM to select Key Gain in the Key Assign menu.
2. Tap Key displays. Tap "up" on the key that you want to adjust.
3. The current listen level displays in the ***Call waiting*** window.
4. Press ⇊ o r ⇈ to change the listen level.
5. You may tap additional point-to-point or party line keys to change their listen levels. Or, tap CLR to quit.

☞ You do not need to run Save Cfg to store key gain changes. These are stored in the intercom system.

Key Assign Menu, Reset Vols

Use this menu item to simultaneously reset gains for all point-to-point or party line keys.

1. Press FWD or PGM to select Reset Vols in the Key Assign menu.
2. Done displays. All key gains are now reset to the default level.
3. Tap CLR to quit.

☞ You do not need to run Save Cfg after resetting key gains. These settings are stored in the intercom system.

Key Assign Menu, Setup Page

Use this menu item to change the setup page assignments on the KP-32 or EKP-32. One setup page is used for the top row of keys, and another setup page is used for the bottom row.

1. Press FWD or PGM to select Setup Page in the Key Assign menu.
2. Page 1 displays.
3. Press ⇊ o r ⇈ to select any of the following:

   Page 1: Assign setup page 1 to the KP-32 or EKP-32.

   Page 2: Assign setup page 2 to the KP-32 or EKP-32.

   Page 3: Assign setup page 3 to the KP-32 or EKP-32.

   Page 4: Assign setup page 4 to the KP-32 or EKP-32.

   Clear Page: Clear a page assignment from the KP-32 or EKP-32.
4. Tap PGM.
5. Tap Key displays. Tap any key in the row where you want to assign the setup page. The key assignments for that page should appear in the displays.
6. You can press ⇊ o r ⇈ to select and assign another setup page. Or, tap CLR to exit.

☞ You do not need to run Save Cfg to store changes to setup pages. These are stored in the intercom system.

KEY OPTION MENU

Key Option Menu, Auto Dial

Use this menu item to store auto dial numbers.

1. Select Auto Dial, then tap PGM.
2. Phone#? displays.
3. Begin tapping number keys. The numbers will scroll in the ***Call waiting*** window.

☞ To insert a pause at any time, tap CLR 9 9. For example, you may have to insert a pause after dialing 9 to get an outside line.

4. Tap FWD. (**Do not tap PGM!**)

5. A-Dial #1 displays (store auto dial number 1). To store a different auto dial number, press ↓↓ or ↑↑ to select the desired auto dial number.

6. Tap PGM.

7. #XX saved displays (where XX = the auto dial number you selected).

8. Run Service Menu, Save Cfg, page 44, to store auto dial numbers.

Key Option Menu, Chime

You can add a chime tone to any key for incoming call announcement. The chime tone will activate for about 5 seconds after a call is received.

1. Select Chime, then tap PGM.

2. Tap any keys where you want to add a chime tone. Both LEDs will light red for the selected keys.

3. Tap CLR to exit.

4. Run Service Menu, Save Cfg, page 44, to store Chime settings.

☞ The chime option will continue on a key even if you change the key assignment.

Removing the chime option from a key

Repeat the procedure to add chime, but tap any keys where the LEDs are lit red to turn them off. Run Save Cfg to store the changes.

Key Option Menu, Key Groups

You can set up a key group, so that when you activate one key (the master key) all keys in the group will activate. Up to 4 key groups can be set up.

1. Select Key Groups, then tap PGM.

2. Group 1 displays. To select a different group, press ↓↓ or ↑↑.

3. Tap PGM.

4. Tap Master displays. The master key is the key that you will press to activate the group.

5. Tap the intercom key that you want to use as the master. Both LEDs next to the key will light red.

6. After you select the master key, Tap Slaves displays. Slave keys are the keys that will activate along with the master key.

7. Tap one or more keys to select them as slave keys. Both LEDs will light green for each key that is selected. You can tap a key again to remove it from the key group.

8. Tap CLR when finished.

9. Activating the master key should now cause it and all slave keys to activate. The LEDs for each key will activate according to the current key assignment for that key.

10. Run Service Menu, Save Cfg, page 44, to store Key Group settings.

☞ Key group settings will continue on keys even if you change the key assignments.

Clearing a key group

1. Select Key Groups, then tap PGM.
2. Group 1 displays. To select a different group, press ↓↓ or ↑↑.
3. Tap PGM.
4. Tap Master displays.
5. Tap the current master key. The LEDs will remain lit red.
6. After you tap the master key, Tap Slaves displays.
7. Tap all the keys where the LEDs are lit green. This will turn the LEDs off.
8. Tap CLR when finished.
9. The key group is now cleared.
10. Run Service Menu, Save Cfg, page 44, to store the cleared key group setting.

Key Option Menu, Solo

A solo key will cause all other keys to turn off when activated. You can assign one solo key.

1. Select Solo, then tap PGM.
2. Tap Key displays.
3. Tap a key. Both LEDs for the key will light red to confirm the assignment. Tap the key again if you made a mistake and want to remove the assignment.
4. Tap CLR when finished.
5. Activating the solo key should now cause all other activated keys to turn off. The keys will turn back on again when you turn off the solo key.
6. Run Service Menu, Save Cfg, page 44, to store the Solo setting.

☞ The solo option will continue on a key even if you change the key assignment.

Removing the solo key option

1. Select Solo, then tap PGM.
2. The LEDs for the solo key will be lit red.
3. Tap the solo key to turn off the LEDs.
4. Tap CLR to exit.
5. The solo key is now cleared.
6. Run Service Menu, Save Cfg, page 44, to save the change.

SERVICE MENU

Service Menu, Dim

This item causes the speaker or headphone level to diminish by a specified amount whenever a talk key is activated.

1. Select Dim, then tap PGM.
2. Speaker displays. To select headset, press ↓↓.
3. Tap PGM.
4. By default, -8dB displays for speaker, and 0dB displays for headset. This is the default amount of dimming.
5. Press ↓↓ to increase the amount of dimming. Press ↑↑.to decrease it.
6. Tap CLR to exit when finished.
9. The new dimming level is now set.
10. Run Service Menu, Save Cfg, page 44, to store the Dim setting.

Service Menu, Disply Dim

This item adjusts the alphanumeric display settings.

1. Select Disply Dim, then tap PGM.
2. Displ Off displays
3. Press ↓↓ or ↑↑.to select any of the following:

   Displ Off: Turns off the display. Any incoming call, or control movement, will reactivate the display.

   Dim: Possibly a better choice when the ambient light level is low. Uses less power and increases display life.

   Normal: Default medium brightness setting.

   Bright: Good when ambient light is bright.

   Maximum: Recommended only for very bright ambient light, such as outdoors. Uses maximum power and decreases display life.

   Scr Saver: Overrides the normal screen saver timeout period and immediately places the keypanel in screen saver mode. Normal display operation resumes if there is an incoming call or if the user actuates any control.

☞ For settings which change the operating brightness, run Service Menu, Save Cfg, page 44, to store the setting.

Service Menu, DSP Func

This item accesses the digital signal processing features.

1. Select DSP Func, then tap PGM.
2. Filtering displays. Press ↓↓ or ↑↑.to display any of the following items:

   Filtering

   Gating

   Metering

   Mixing
3. Refer to one of the following paragraphs for further information on the item that you select.

Filtering

Filtering lets you add a 19.2 kHz notch filter to one or more audio sources. This can be useful in a few cases when the keypanel data port signal is being heard in the audio line due to cable routing problems.

1. Select Filtering, then tap PGM.
2. Microphone displays. Press ↓↓ or ↑↑.to display any of the following items:

   Microphone

   Matrix

   Program 1

   Program 2
3. Tap PGM.
4. →None displays to indicate that no filtering is selected.
5. Press ↓↓.
6. Notch displays.
7. Press PGM.
8. →Notch displays. The arrow indicates that the notch filter is now selected.
9. Tap CLR to exit.
10. Run "Service Menu, Save Cfg", page 44, to save the change.

Gating

Gating minimizes or eliminates background noise problems by shutting off an audio source when the sound level drops below a certain threshold.

1. Select Gating, then tap PGM.
2. Microphone displays. Press ↓↓ or ↑↑.to display any of the following items:

   Microphone

   Matrix

Program 1

Program 2

3. Tap PGM.
4. Gating displays.
5. Tap PGM.
6. →Gating displays. The arrow indicates that gating is now selected.
7. Tap CLR to exit.
8. Run "Service Menu, Save Cfg", page 44, to save the change.

Metering

Metering lets you use the ***Vol.*** display as an LED bar graph meter to monitor an audio signal for about 1 minute.

1. Tap PGM. Microphone displays. Press ↓↓ or ↑↑.to display any of the following items:

   Microphone

   Matrix

   Program 1

   Program 2

2. Tap PGM.
3. Meter: Mic displays. Press ↓↓ or ↑↑.to display any of the following items:

   Meter: Mic

   Meter: Mtx

   Meter: Pgm1

   Meter: Pgm2

3. Tap PGM.
4. The ***Vol.*** bar graph is now monitoring the selected audio source.
5. Tap CLR to exit metering, or allow the metering function to timeout after about 1 minute.

Mixing

Mixing lets you route selected audio signals to the intercom system, to the speaker, or to the left or right headphone when using a headset. By default, the microphone signal is routed to the matrix, and the matrix signal is routed to the speaker and to the left and right headphones.

1. Tap PGM.
2. To Matrix displays. Press ↓↓ or ↑↑.to display any of the following items:

`To Matrix`

`Speaker`

`Left Hdst`

`Right Hdst`

3. Tap **PGM**.

4. `→Mic` or `Mic` d isplays. If an arrow displays, this indicates that the mic signal is currently being routed to the destination that you selected in step 2. To toggle the selection, press **PGM**. You can also press ⇊ or ⇈.to display and toggle any of the following items:

   `Mic`

   `Matrix`

   `Program 1`

   `Program 2`

5. Tap **CLR** to exit when you are finished changing the mixing selections.

6. Run Service Menu, Save Cfg, page 44, to store any mixing changes.

Service Menu, Hdst Sel

This item lets you select either the front panel headset jack or the headset connector on the optional rear connector module. By default, the front panel jack is selected.

1. Select `Hdst Sel`, then tap **PGM**.

2. `→Default` displays. The arrow indicates the default front panel jack is selected.

3. To change the selection, press ⇊.

4. `External` displays.

5. Tap **PGM**.

6. `→External` displays. This indicates that the rear panel jack is now selected.

7. Tap **CLR** to exit.

8. Run Service Menu, Save Cfg, page 44, to store the new setting.

Service Menu, LCP-32

By default, each LCP-32 that you connect to the KP-32 takes control of level adjustment for the first available group of 16 physical keys that it finds. The first LCP-32 adjusts keys 1-16, which corresponds to the bottom row of keys on the KP-32; the second LCP-32 adjusts keys 17-32, and so forth (Figure 4). If you do not want to use an LCP-32 with certain keys, you must program the KP-32 to skip those keys.

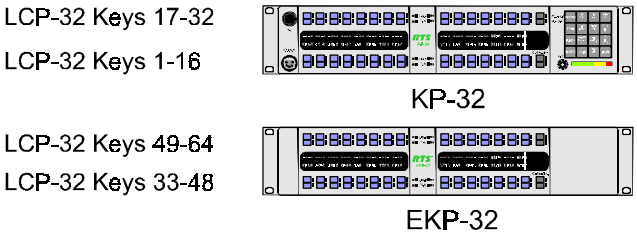

Figure 4. LCP-32 correspondence to KP-32 and EKP-32 keys

For example, you may not want to use LCP-32s with the KP-32 but do want to use them with an EKP-32. In this case, you must turn off LCP usage for keys 1-32 as follows:

1. Select `LCP-32`, then tap **PGM**.
2. `1-16: Yes` displays. This indicates that the first connected LCP-32 will attach to keys 1-16.
3. Tap **PGM**.
4. `1-16: Skip` displays. This indicates that the first connected LCP-32 will skip keys 1-16 and will attach to the next available row of keys.
5. Tap ⇓⇓ to display `17-32: Yes`.
6. Tap **PGM**.
7. `17-32: Skip` displays. This indicates that the first connected LCP-32 will skip keys 17-32 and will attach to the next available row of keys.
8. Tap **CLR** to exit.
9. Run "Service Menu, Save Cfg", page 44, to store the new LCP-32 settings.

Service Menu, Local GPIO

If your KP-32 has an optional Connector Module, you can use this menu item to assign the GPIO inputs and outputs. Inputs can be assigned to activate intercom keys (including group master keys and a solo key). Outputs can be activated by intercom keys. Set up inputs and outputs as follows:

Assigning an Input to Activate a Key

1. Select `Local GPIO`, then tap **PGM**.
2. `Input` displays.
3. Tap **PGM**.
4. `GPI Inp #1` displays.
5. Press ⇓⇓ or ⇑⇑.to display a different GPI input.
6. Tap **PGM** to select a GPI input.
7. Press ⇓⇓ to select `Talk Key`.
8. Tap **PGM**.
9. `Tap Key` displays.

10. Tap the intercom key that you want to assign. This is the key that will activate when the GPI input activates.
11. Tap CLR to exit, or BACK to back up and make more assignments.
12. "Run Service Menu, Save Cfg", page 44, to store local GPIO settings.

Assigning an Input to Activate a Key Group

1. Select Local GPI◊, then tap PGM.
2. Input displays.
3. Tap PGM.
4. GPI Inp #1 displays.
5. Press ↓↓ or ↑↑ to display a different GPI input.
6. Tap PGM to select a GPI input.
7. Press ↓↓ to select Group.
8. Tap PGM.
9. By default, Group 1 displays. Press ↓↓ or ↑↑.to display a different group.
10. Tap PGM. An arrow will appear to indicate that the group is now selected. For example, if you press PGM to select Group 1, →Group 1 displays.
11. Tap CLR to exit, or BACK to back up and make more assignments.
12. Run Service Menu, Save Cfg, page 44, to store local GPIO settings.

Removing an Input Assignment

1. Select GPI◊, then tap PGM.
2. Press ↓↓ or ↑↑ if necessary to select Input.
3. Tap PGM.
4. Press ↓↓ or ↑↑.to display the GPI input that you want to remove.
5. Tap PGM.
6. Press ↓↓ to select Not Asgnd.
7. Tap PGM.
8. →Not Asgnd displays. The arrow indicates that "Not Assigned" is the new selection.
9. Tap CLR to exit.
10. Run Service Menu, Save Cfg, page 44, to store local GPIO settings.

Adding or Removing a GPI Output Key Assignment

1. Select `Local GPIO`, then tap **PGM**.
2. `Input` displays.
3. Press ↓↓ to display `Output`.
4. Tap **PGM**.
5. `GPI Out #1` displays.
6. Press ↓↓ or ↑↑ to display a different GPI output.
7. Tap **PGM** to select a GPI output.
8. `Tap Key` displays. Also, if there is a key currently assigned to activate the selected GPI output, both LEDs for that key will be lit red. If there is no assignment, no LEDs will be lit red.
9. Tap an intercom key to add or remove the GPI output assignment.
10. Tap **CLR** to exit, or **BACK** to back up and make more assignments.
11. Run Service Menu, Save Cfg, page 44, to store local GPIO settings.

Service Menu, Mic Preamp

This menu item works with the optional Connector Module. It turns the Mic Preamp output connector on or off.

1. Select `Mic Preamp`, then tap **PGM**.
2. Tap **PGM** to turn the preamp on or off. `→Preamp` indicates that the preamp is on. `Preamp` (without the arrow) indicates that the preamp is off.
3. Tap **CLR** to exit
4. Run "Service Menu, Save Cfg", page 44, to store the new preamp setting.

Service Menu, Mod Assign

☞ Normally, this is a service adjustment that is required only when replacing a key and display module. It may also be required if for some reason, the key assignments, as displayed in ADAMedit, appear to be in the wrong positions on the keypanel or expansion panel.

The KP-32 and EKP-32 use module ID numbers (Mod ID numbers) to define the address of each key and display module. See Figure 5. By default, Mod 1 is always assigned to the right half of the KP-32 and this never changes, since this module has the keypad and is unique. However, the rest of the modules are identical. When replacing any of these modules, you may have to reset the Mod ID number as follows:

1. Select `Mod Assign` from the Service menu and tap **PGM**.
2. `Cancel?` displays. To exit the procedure without making changes, tap **PGM**.
3. All of the alphanumeric displays, except Mod 1, will appear as shown in Figure 5. Assign the Mod IDs as shown in the figure. Repeat the procedure for each module.

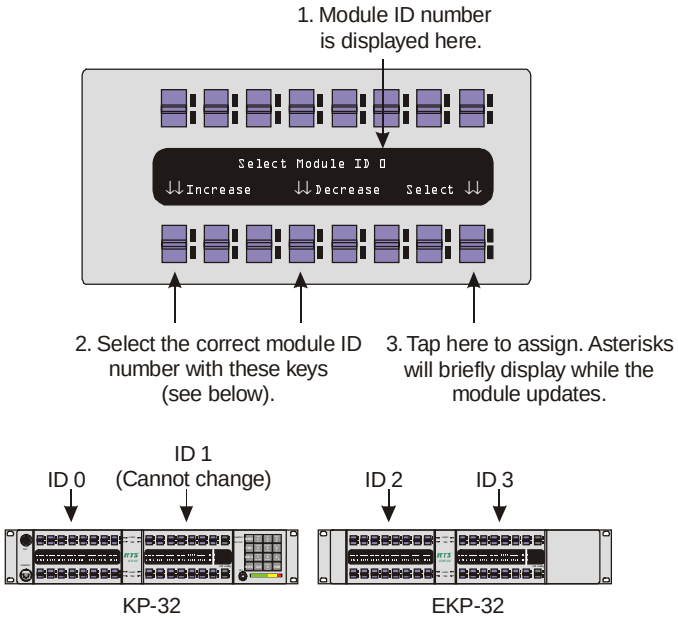

Figure 5. Mod ID assignments for the KP-32 and EKP-32

☞ You do not need to run Save Cfg after changing Mod assignments.

Service Menu, Pgm Inputs

Run Service Menu, Save Cfg, page 44, to store Pgm Input settings.

Assign program inputs to

Service Menu, Reset Cfg

Reset Cfg restores all custom settings to the defaults and erases all stored autodial numbers.

Service Menu, Save Cfg

Save Cfg **PGM** saves custom settings that you have made in the Key Option or Service menus. made in the After customizing settings in the Key Option and Service menus, run Save Cfg to store your custom settings in non-volatile memory. This will assure protection of you settings when the keypanel is powered down. To erase all custom settings, run Service Menu, Reset Cfg.

Service Menu, Sidetone

Sidetone **PGM** lets you adjust the level of you own voice heard in the headphones when using a headset. Most people prefer some amount of sidetone to overcome the muffled sensation when talking, especially when wearing a full-muff headset.

Service Menu, Test Panel

Test Panel **PGM** lets you check the operation of all key and displays.

All alpha-numeric displays show a % symbol. Pressing down on any key (except the ***Headset*** / ***Vol. Sel.*** key) will cause OK to display. This verifies operation of the key. Tapping up or down on the ***Headset*** / ***Vol. Sel.*** key will cause the display to cycle through the available selections.

If latching is enabled, tapping up or down on any intercom key, or the ***Call waiting*** key, will cause the corresponding red LED to light. This verifies latching operation and also that the each red LED is OK.

Holding any key in the up or down position will cause the corresponding green LED to light. This verifies operation of the green LEDs.

Tapping any keypad button (except CLR) will cause the keypad button name to appear in the ***Call waiting*** window. This verifies operation of the keypad buttons.

Tap **CLR** to quit.

Service Menu, Tone Gen

Tone Gen **PGM** turns the KP-32 tone generator on or off. You can use the tone generator to check the audio path from the keypanel to the matrix and back.

Tap **CLR** to quit.

GLOSSARY

All Call
For talk key assignment only. Activating an All Call key will also activate all talk keys to the left of the All Call key (up to, but not including another All Call key).

Alpha
Alphas are the user-changeable names which identify destinations (intercom ports, party lines, etc). Change Alpha names for intercom ports using the Port Alpha button in ADAMedit. Change Alpha names for everything else using the Other Alpha button. When you assign a destination to a talk key, the alpha name will appear in the alphanumeric display for that key (on keypanels so equipped).

Auto Follow (AF)
A key assignment for listen keys only. Auto follow causes a key's listen assignment to always be the same as the talk assignment. Thus, if you change the talk assignment, you do not also have to change the listen assignment. You can manually activate an auto-follow listen key independently of the talk key. If you want auto-activation (or deactivation) of listen during talk, use one of the other auto key assignments, such as auto listen or auto mute.

Auto Functions
Auto functions are special key assignments that work with other key assignments. For further information, see the glossary descriptions of individual auto functions: auto-follow, auto-listen, auto-reciprocal, auto-mute, auto-table, all-call, DIM.

Auto Listen (AL)
A key assignment for listen keys only. This assignment works like auto follow, except that listen automatically activates during talk, Auto listen is sometimes a good assignment for use with party lines or other non-keypanel devices that do not have talk-back control of matrix crosspoints.

Auto Mute (AM)
A key assignment for listen keys only. This assignment works like auto follow, except that listen automatically mutes during talk. Auto mute can help prevent feedback or echo when talking to certain destinations. In some cases, you may find it works better to disable talk latching for this type of key, because if you accidentally leave talk latched on you will never be able to hear the destination. To disable latching, in the Keypanels / Ports menu of ADAMedit, check the "D" check box for any talk key that has auto mute selected as the listen assignment.

Auto Reciprocal (AR)
A key assignment for listen keys only. This assignment forces you to continuously listen to whatever is assigned to the talk key. It is used commonly on keypanels which are not equipped with listen keys, to allow listening to party lines. It is also useful to force listening when it is desirable to have an operator continuously hear a party line or other source.

Auto Table (AT)
A key assignment for listen keys only, when the corresponding talk key is assigned to an IFB. Auto Table causes a listen key's assignment to always be the same as the Listen Source for whatever IFB is currently assigned to the talk key. (You define the Listen Source in ADAMedit during IFB setup.) Auto Table is convenient in a broadcast environment when a director needs 2-way communication with the IFB talent, AND the IFB keys are frequently reassigned during the course of a program to talk to new talent locations. Using ADAMedit, several IFBs can be set up in advance, and their Listen Sources can also be defined during setup. Then every time an IFB talk key is reassigned on a keypanel, the Listen Source for each new IFB will automatically become the listen key assignment for that key. For further information about Auto Tables, Listen Sources, and IFBs, search for "IFB" in ADAMedit help.

Crosspoint
The term "Crosspoint", like the term "Matrix" is inherited from intercom systems, such as the RTS CS9500, CS9600, and CS9700, that use a switching matrix to route intercom audio. In those systems, the crosspoints are the actual switches that close or open to connect or disconnect talk and listen paths.

RTS ADAM, ADAM CS, and Zeus Intercom Systems do not actually use crosspoint switches, but use a technique called time division multiplexing (TDM), in which communications are routed as digital packets. However, use of the term "crosspoint" persists since packet routing basically accomplishes the same thing as conventional crosspoints: namely, connecting distinct talkers and listeners. In this sense, a crosspoint can be thought of simply as a communication link between any two points in the intercom system.

Destination

A destination is anything that a talk key talks to or a listen key listens to. A destination can therefore be any port, party line, IFB, etc.

Dim

"Dim" occurs in two contexts in RTS Digital Matrix Intercom Systems.

First, there is the Dim Table feature. Dim tables are used to correct a feedback problem that can occur between two keypanels operating in close proximity that have keys assigned to talk/listen to a common destination. Dim tables are set up in ADAMedit (search for keyword "dim" in ADAMedit help. Once a dim table is set up, it can be assigned as a level 2 talk assignment for those keys that are causing the feedback problem. For information about how to make this assignment from a programmable keypanel, search for "Dim Table" in the keypanel manual index.

There is also an adjustable speaker dim feature available on the KP-32 Keypanel. This causes the speaker or headphone volume to diminish by a preset amount whenever a talk key is activated. This can help to prevent occasional feedback between the speaker and microphone due to volume settings, microphone placement, etc. For setup and usage, search for "Speaker Dim" in the keypanel manual index.

GPIO

General Purpose Input / Output. (You may also see this referred to simply as "GPI".) GPIO is a means of controlling devices using switch contact closures, DC voltages, or similar methods. For example, you can control a lighting system from keypanel keys, or key a transmitter from a talk key during transmit. Or, simply operate a light or buzzer for cueing. In ADAM, ADAM CS, and Zeus intercom systems, you can also control intercom events from external switches. For example, you can activate key assignments, close or open crosspoints, activate GPI outputs, etc.

In CS9000 Series intercom systems, general purpose control outputs are provided by optional FR9528 Relay Frames (8 relays each). In those systems, a relay may be assigned to an intercom key on a keypanel using the Relay key assignment type. Pressing the intercom key activates the relay.

ADAM, ADAM CS, and Zeus intercom systems all have a dedicated GPIO connector (J27 on a Zeus Frame, J903 on an ADAM CS Frame, and J11 on the XCP-ADAM-MC Master Controller Breakout Panel in an ADAM Intercom System). This connector supports 8 control inputs and 8 control outputs. Additionally, one or more UIO-256 Universal Input/Output frames may be connected to the intercom system. Each UIO-256 provides another 16 control inputs and 16 control outputs. Control outputs may be assigned to intercom keys using the Relay key assignment type, and the intercom keys can then control external devices the same as the FR9528. Control inputs can be assigned to activate "virtual" key assignments. (A virtual key assignment is a key assignment at an intercom port where there is not actually any keypanel connected. Basically, you use an external switch to act like a talk or listen key.) The control inputs and outputs can also be used as conditions for UPL statements in ADAMedit.

Finally, there is a GPIO option available for the KP-12 keypanel, and a connector module option for the KP-32, which includes GPIO. These are referred to as "Local" GPIO, since they are assigned and used locally at the keypanel. Each local GPIO includes 4 control inputs and 4 control outputs.

IFB

IFB (Interrupt Foldback) is a special type of communication in which a

listener at a particular intercom output port normally hears an audio program source connected to a particular intercom input port. A keypanel operator can activate a key to interrupt the audio program source and then talk to the listener. Normal operation resumes when the keypanel operator releases the key.

IFB is typically used to cue on-the-air talent. For example, the news anchor during a news broadcast typically listens to the broadcast audio mix in an earset (except that the news anchor's own voice audio is removed from the mix). A director at a keypanel can interrupt the broadcast audio to the news anchor's earset and provide new information to the news anchor. IFB could also be used with a PA (public address) system that normally broadcasts background music. The background music can be interrupted while someone is talking over the PA.

IFB's are set up by defining the IFB inputs and outputs using the intercom system configuration software. The intercom output port is called the IFB output and the program input port is called the IFB input. IFBs can also be given names which are meaningful to keypanel operators. Once an IFB has been set up and named, it can be assigned to any keypanel key (provided that IFB assignment has not been restricted or disabled in the intercom system configuration software). For further information about IFBs, search for "IFB" in ADAMedit help.

ISO (Camera ISO)

ISO is a means for a keypanel operator to isolate a particular intercom port for private communication. While the intercom port is isolated, it can only hear audio from the keypanel operator. ISO is frequently used in television broadcasting to temporarily isolate a member of a camera party line. The isolated camera operator can then receive directions without interference from other audio traffic on the party line. ISOs are setup using the intercom system configuration software. Each ISO can also be given a name which is meaningful to keypanel operators. Once an ISO has been set up and named, it can be assigned to any keypanel key (provided that ISO assignment has not been restricted or disabled in the intercom system configuration software). For further information about ISOs, search for "ISO" in ADAMedit help.

Matrix

"Matrix" is a term inherited from earlier point-to-point intercom systems, where all point-to-point communication was accomplished by closing specific switches in a switching matrix. Examples include the RTS CS9500, CS9600, and CS9700 Intercom Systems. In many instances, "Matrix" is used interchangeably with "Intercom System".

RTS ADAM, ADAM CS, and Zeus Intercom Systems, on the other hand, do not use a switching matrix, but use a method called Time Division Multiplexing (TDM), in which communications are routed as digital packets. However, use of the term "matrix" persists since packet routing basically accomplishes the same thing as a conventional switching matrix: namely, connecting distinct talkers and listeners.

Party Line (PL)

A party line (also called a conference line) is a group of intercom ports which can always talk and/or listen to each other. Party lines have default names PL01, PL02 etc. These names can be changed to more meaningful names using Other Alpha setup in ADAMedit. Members are assigned to a party line using Party Line setup in ADAMedit.

Once a party line has been set up, it can also be assigned to a keypanel key either from the configuration software or at a programmable keypanel. This allows the keypanel operator to talk and/or listen to the party line without being a member.

IMPORTANT: Do not confuse special lists and party lines.

A special list is used when a keypanel operator needs to occasionally talk or listen to a group of intercom ports that are otherwise unrelated.

A party line is typically used when several users of non-keypanel devices (such as belt packs or camera intercoms) are engaged in a

specific common activity and they need to talk and/or listen to each other all the time. Keypanels are almost never members of party lines (although they can be). However, a keypanel key can be assigned to occasionally talk or listen to a party line if desired.

Just remember: party lines are primarily set up for party line members, with occasional access by keypanel operators, while special lists are set up exclusively for keypanel operators to talk or listen to several unrelated intercom ports.

For specific information about party line setup, search for "PL" or "party line" in ADAMedit help.

Port

The ports are the individual channels that devices are connected to. Devices include:

- 2-way communication devices, such as keypanels, belt packs etc.
- Audio sources, such as broadcast feeds or background music
- Miscellaneous audio output devices, such as powered loudspeakers, PA systems etc.

Communication between Ports (Point-to-Point, or P-P)

The audio signal from any input port can be routed to any output port. For example, during keypanel setup, you assign keypanel keys so that keypanel operators can talk and listen to other intercom ports. Communication of this type is called point-to-point communication. You can also route signals between intercom ports without keypanels. One way to do this is to force crosspoints in the Crosspoint Status screen of ADAMedit. Another way to do it is with a GPI input.

Port ID Numbers and Alphas

Intercom ports have identification numbers 001, 002 etc. These numbers cannot be changed, but may not be commonly known to intercom system users. Each intercom port also has a default name, called an "alpha", because this name appears in the alphanumeric displays on keypanels when you assign the ports to keys for talking and listening. The default alpha names are N001, N002 etc. These default alpha names can be changed to ones that are meaningful to keypanel operators using Port Alpha setup In ADAMedit. (Click the "Port Alpha" button in ADAMedit, then press F1 on the computer keyboard if you need help.)

Intercom Data Groups and Port Number Calculation

For data routing purposes, port numbers are arranged in groups of 8 sequential intercom ports. In an ADAM or ADAM CS Intercom System, each Audio I/O card comprises one data group. In a Zeus Intercom System, each group of 8 port connectors comprises a data group. Within each data group, each keypanel is uniquely identified by its address setting. Whenever you display the Panel ID, the intercom system determines which data group the keypanel is connected to, and also the address setting. It then reports the calculated address. For example, suppose a keypanel is connected to data group 3 and the keypanel address is set to 5. Since each data group consists of 8 sequential intercom ports, the calculated port number for this keypanel will be (2*8) + 5, or 21. This is the total of all intercom port numbers on the first 2 data groups, plus the offset of 5 ports into the third data group.

Port Gains

RTS Keypanels are calibrated to send and receive audio at the standard operating levels of the intercom system. No audio gain adjustment is normally required when connecting these. However, many other types of devices may not operate at the standard intercom system levels. To assure signal level compatibility between the various types of audio devices connected to the intercom system, there are separate analog input and output gain adjustments for each intercom port.

It is also possible to adjust the listen gain for any specific intercom port when listening to any other specific intercom port. This is called the point-to-point listen gain, or crosspoint gain. For example, a keypanel operator might want to monitor a music source connected at some intercom port, but at a reduced audio level so that it does not interfere with normal intercom communications. The crosspoint gain can be reduced for the keypanel port listening to the port where the music source is connected.

Analog gain adjustment is only available using ADAMedit. Crosspoint gains can be adjusted either within ADAMedit or from a programmable keypanel. For further information on any gain adjustment in ADAMedit, search for keyword "gain" in ADAMedit help. For procedures to adjust gain from a programmable keypanel, look for "gain" in the manual index.

Relay

Relay is used interchangeable with GPI output. The relay feature works with the 16 GPI outputs of an optional UIO-256 Universal Input / Output Frame, and with the relay outputs of an FR9528 Relay Frame. The relay feature also works with the 8 GPI outputs of an ADAM, ADAM CS, or Zeus intercom system (J27 on a Zeus Frame, J903 on an ADAM CS Frame, and J11 on the XCP-ADAM-MC Master Controller Breakout Panel in an ADAM Intercom System). You can assign a keypanel key to control a GPI output from any of these devices, and then use that key and output to control an external device. For example, you could use a keypanel key to control lighting. Or, you could assign a relay as a level 2 talk key assignment in a stacked talk key arrangement to both send audio and key a device, such as a paging amplifier or a 2-way radio.

Special List

A special list is a means for a keypanel operator to talk and/or listen to several unrelated destinations using a single key. Special lists are useful for group call or zone paging. Special list members are defined in the intercom configuration software. Once a special list has been configured, it can be assigned to a keypanel key.

A special list is a group of intercom ports that a keypanel operator can talk or listen to by activating a single key. Special lists are typically used for paging, all call, group call etc. Special lists have default names SL01, SL02 etc. These names can be changed using Other Alpha setup. You define the members of the special list using Special List setup. Once a special list has been set up, you typically assign it to a keypanel key using Keypanel setup. The keypanel operator can then activate the special list key to talk or listen to all members of the special list.

IMPORTANT: Do not confuse special lists and party lines.

> A special list is used when a keypanel operator needs to occasionally talk or listen to a group of intercom ports that are otherwise unrelated.
>
> A party line is typically used when several users of non-keypanel devices (such as belt packs or camera intercoms) are engaged in a specific common activity and they need to talk and/or listen to each other all the time. Keypanels are almost never members of party lines (although they can be). However, a keypanel key can be assigned to occasionally talk or listen to a party line if desired.
>
> Just remember: party lines are primarily set up for party line members, with occasional access by keypanel operators, while special lists are set up exclusively for keypanel operators to talk or listen to several unrelated intercom ports.

For specific information about special list setup, search for "special list" in ADAMedit help.

Stacked Key

See the descriptions for talk level, talk level 2.

Talk Level 1

Talk level 1 is the normal talk key assignment. This is the assignment that normally appears in the alphanumeric display (on keypanels so equipped). You may add a talk level 2 assignment to activate a second device along with talk level 1.

Talk Level 2

Talk level 2 is used with stacked talk keys. A stacked talk key activates two types of communication at once. For example, a stacked talk key could simultaneously activate audio output to a transmitter and key the transmitter using a relay. The audio output is called the level l assignment and the relay is called the level 2 assignment.

Trunking

Trunking is a method of interconnecting two or more independent intercom systems. The connection is accomplished by reserving one or more audio ports in each of the intercom systems for use as audio links between the systems. A special device, called a Trunking Master Controller, is required to control access and usage for the trunked intercom ports. A configuration utility, called CStrunk, is used to set up the Trunking Master Controller.

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Table 1. Address number vs intercom port numbers for 8-Port Audio I/O Cards (ADAM and ADAM CS Intercom Systems)

Address	Card Numbers (bold headings) and Port Numbers																								
Cards 1-25																									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
1	1	9	17	25	33	41	49	57	65	73	81	89	97	105	113	121	129	137	145	153	161	169	177	185	193
2	2	10	18	26	34	42	50	58	66	74	82	90	98	106	114	122	130	138	146	154	162	170	178	186	194
3	3	11	19	27	35	43	51	59	67	75	83	91	99	107	115	123	131	139	147	155	163	171	179	187	195
4	4	12	20	28	36	44	52	60	68	76	84	92	100	108	116	124	132	140	148	156	164	172	180	188	196
5	5	13	21	29	37	45	53	61	69	77	85	93	101	109	117	125	133	141	149	157	165	173	181	189	197
6	6	14	22	30	38	46	54	62	70	78	86	94	102	110	118	126	134	142	150	158	166	174	182	190	198
7	7	15	23	31	39	47	55	63	71	79	87	95	103	111	119	127	135	143	151	159	167	175	183	191	199
8	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160	168	176	184	192	200
Cards 26-50																									
	26	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**
1	201	209	217	225	233	241	249	257	265	273	281	289	297	305	313	321	329	337	345	353	361	369	377	385	393
2	202	210	218	226	234	242	250	258	266	274	282	290	298	306	314	322	330	338	346	354	362	370	378	386	394
3	203	211	219	227	235	243	251	259	267	275	283	291	299	307	315	323	331	339	347	355	363	371	379	387	395
4	204	212	220	228	236	244	252	260	268	276	284	292	300	308	316	324	332	340	348	356	364	372	380	388	396
5	205	213	221	229	237	245	253	261	269	277	285	293	301	309	317	325	333	341	349	357	365	373	381	389	397
6	206	214	222	230	238	246	254	262	270	278	286	294	302	310	318	326	334	342	350	358	366	374	382	390	398
7	207	215	223	231	239	247	255	263	271	279	287	295	303	311	319	327	335	343	351	359	367	375	383	391	399
8	208	216	224	232	240	248	256	264	272	280	288	296	304	312	320	328	336	344	352	360	368	376	384	392	400
Cards 51-75																									
	51	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**	**61**	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**	**71**	**72**	**73**	**74**	**75**
1	401	409	417	425	433	441	449	457	465	473	481	489	497	505	513	521	529	537	545	553	561	569	577	585	593
2	402	410	418	426	434	442	450	458	466	474	482	490	498	506	514	522	530	538	546	554	562	570	578	586	594
3	403	411	419	427	435	443	451	459	467	475	483	491	499	507	515	523	531	539	547	555	563	571	579	587	595
4	404	412	420	428	436	444	452	460	468	476	484	492	500	508	516	524	532	540	548	556	564	572	580	588	596
5	405	413	421	429	437	445	453	461	469	477	485	493	501	509	517	525	533	541	549	557	565	573	581	589	597
6	406	414	422	430	438	446	454	462	470	478	486	494	502	510	518	526	534	542	550	558	566	574	582	590	598
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8	408	416	424	432	440	448	456	464	472	480	488	496	504	512	520	528	536	544	552	560	568	576	584	592	600
Cards 76-100																									
	76	**77**	**78**	**79**	**80**	**81**	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**89**	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**	**100**
1	601	609	617	625	633	641	649	657	665	673	681	689	697	705	713	721	729	737	745	753	761	769	777	785	793
2	602	610	618	626	634	642	650	658	666	674	682	690	698	706	714	722	730	738	746	754	762	770	778	786	794
3	603	611	619	627	635	643	651	659	667	675	683	691	699	707	715	723	731	739	747	755	763	771	779	787	795
4	604	612	620	628	636	644	652	660	668	676	684	692	700	708	716	724	732	740	748	756	764	772	780	788	796
5	605	613	621	629	637	645	653	661	669	677	685	693	701	709	717	725	733	741	749	757	765	773	781	789	797
6	606	614	622	630	638	646	654	662	670	678	686	694	702	710	718	726	734	742	750	758	766	774	782	790	798
7	607	615	623	631	639	647	655	663	671	679	687	695	703	711	719	727	735	743	751	759	767	775	783	791	799
8	608	616	624	632	640	648	656	664	672	680	688	696	704	712	720	728	736	744	752	760	768	776	784	792	800

KP9X KEYPAD SEQUENCE QUICK REFERENCE

KP9X DISPLAY SEQUENCES

FUNC DISPLAY 0 . Diagnostics mode.

FUNC DISPLAY 1 . Display port number.

FUNC DISPLAY 2 . Display level 2 talk assignments.

FUNC DISPLAY 3 . Display listen assignments.

FUNC DISPLAY -8 Display setup page assignments.

FUNC DISPLAY ↓↓ or ↑↑ to select items as follows:

Id PGM: Display the calculated port number. CLR to end.

Lev2 PGM: Display level 2 talk assignments. CLR to end.

Lstn PGM: Display listen assignments. CLR to end.

Name PGM: Display crosspoints closed to this keypanel. CLR to end.

Type PGM: Display level 1 talk key assignment types. CLR to end.

Mtx PGM: Display matrix ID for all level 1 talk assignments. CLR to end.

Tone PGM: Turn on tone generator. CLR to end.

Epnl PGM: Display setup page assignments. Mn=KP-32 top row keys. X1=KP-32 bottom row key. X2=EKP-32 top row keys. X3=EKP-32 bottom row keys.

Gain PGM: Port / party line listen gain. Turn on listen key. ↓↓ or ↑↑ to change gain.

VRst PGM: Reset all port / party line gains to 0dB.

Asgn PGM: Display key assignments that are not currently accessible.

Test PGM: Test keys and displays. CLR to end.

Vxxx : Display keypanel firmware version. CLR to end.

KP9X SETUP PAGE ASSIGNMENT

1. Tap E-PNL.
2. Select a setup page: tap 1 , or 2 , etc.
3. Tap PGM.
4. Tap any key in top row to assign page to top row. Tap any key in bottom row to assign page to bottom row.

KEY ASSIGNMENTS USING KEYPAD NUMERIC ENTRY

1. For talk level 2 assignment only: Tap 0 0 .

2. Select the key assignment type:

   NUM Intercom port.

   PL Party line.

   AUTO Auto function.

   FUNC SLIST Special list.

   FUNC IFB IFB

   FUNC ISO Camera ISO

   FUNC RELAY Relay or GPI output.

3. Auto function assignment only: Tap an additional number to select the desired auto function:

   1 Auto listen

   2 Auto follow

   3 Auto mute

   4 Auto reciprocal

   5 All call

   6 DIM (talk level 2 only, for point-to-point key)

   7 Auto table (use only with IFB)

3. Trunked intercoms only: Select an intercom matrix (tap 1, or 2 etc.).

4. Tap one or more number keys to select the desired port number, party line number, etc:

   a. If the destination is in the local matrix, just enter the number.

   b. If the destination is in a remote matrix, you must always enter at least 3 digits, so for example to assign port 1 you must enter 0 0 1.

5. Tap PGM.

6. Tap down on a key to assign talk. Tap up to assign listen.

KP9X PHONE OPERATION

KP9X Hang-up Sequence

1. Turn off the TIF talk key.

2. On the keypad, tap PHONE-CLR.

3. Turn the TIF talk key on, then off. The TIF key talk and listen indicators will turn off and the TIF-951 "OFF" LED will activate.

KP9X Dial Sequence

1. Activate the TIF listen key (listen LED green).

2. Make sure the TIF talk key is off (Talk LED off).

3. On the keypad, tap CLR-PHONE-PGM.

4. Activate the TIF talk key (talk LED turns green). The "ON" LED at the TIF-951 will activate, and you should hear dial tone at the KP-32.

5. Dial the telephone number. Digits scroll in the display above the TIF talk key.

6. When the far end answers, you can dial additional digits (to access a mail system or automated response system, etc.). When finished dialing, momentarily turn off the TIF talk key to end dialing mode (talk LED turns red).

7. Turn the TIF talk key back on for conversation.

KP9X Redial Sequence

1. Tap the **PHONE** key to activate dialing mode.

2. Tap "up" on the TIF key to activate listen.

3. Tap **CLR** **0** **0**. The last phone number will redial.

4. After the number has dialed, click the **PHONE** key to end dialing mode.

5. If the far end answers, tap "down" on the TIF key to activate talk.

6. Use the KP9X hang-up sequence to hang up.

KP9X Autodial Sequences

Storing an Autodial Number in the TIF-951

1. Tap the **PHONE** key.

2. Tap the TIF talk key to latch it on.

3. Using the number keys on the keypad, dial the phone number that you want to store. The entire phone number sequence can have up to 30 digits.

☞ To insert one or more pauses anywhere in the dialing sequence, enter **CLR** **CLR** **9** **9** for each pause.

4. After dialing the telephone number, click **CLR** **PGM**, then enter a two-digit number (01, 02, etc. up to 32) that you will use as the autodial number.

5. After storing the autodial number, hang up using the KP9X hang-up sequence.

Dialing an Autodial Number Stored in the TIF-951

1. Tap the **PHONE** key to activate dialing mode.

2. Tap "down" on the TIF talk key to latch it in the on position.

3. Tap **CLR** followed by the autodial number (01, 02, etc.).

4. When finished dialing, click the **PHONE** key again to exit dialing mode.

5. Hang up using theKP9X hang-up sequence.

KP-32 MENU SYSTEM QUICK REFERENCE

MENU ACCESS

1. Clear all names from the ***Call waiting*** display (if not clear) by tapping "up" one or more times on the ***Call waiting*** key.
2. Tap MENU to activate the menu system.
3. Press ↓↓ to scroll forward through the list of menus. Press ↑↑ to scroll back.
4. Tap FWD or PGM to enter a menu. Tap BACK to exit a menu.
5. Within a menu:
   - Press ↓↓ or ↑↑ to scroll.
   - Tap FWD or PGM to select an item.
   - Tap BACK to cancel a selection or to go back to the previous menu level.

MENU LIST

DISPLAY MENU	KEY ASSIGN MENU	KEY OPTION MENU	SERVICE MENU
Asgn Type	Matrix	Auto Dial*	Dim*
Chans On	Key Assign Menu, Pt-to-Pt	Chime*	Disply Dim*
Key Groups	Party Line	Key Groups*	DSP Func*
Level 2	IFB	Solo*	Hdst Sel*
Listen	Spcl List		LCP-32*
Matrix	Sys Relay		Local GPIO*
Panel ID	Camera ISO		Mic Preamp*
Version	UPL Resrc		Mod Assign*
	Auto Func		Pgm Inputs*
	Key Gain		Reset Cfg
	Reset Vols		Save Cfg
	Setup Page		Sidetone*
			Test Panel
			Tone Gen

* Run Save Cfg, page 44, to save these settings.